# AMERICAN VETERINARY REVIEW.

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## EDITORIAL.

### RUSH SHIPPEN HUIDEKOPER.

This distinguished veterinarian died of a complication of diseases, hastened by pneumonia, at Philadelphia, on the 16th ult., and the profession of America has thus lost one of its most conspicuous representatives. Few men have entered upon their life-work better equipped for it than our deceased colleague. Possessed of a splendid constitution, a liberal education, great wealth and influence, a natural love for its truths and mysteries, he could easily command whatever his fancy dictated. A basic medical education placed him in an enviable position when he sought his veterinary degree from historic Alfort, and, not content with her stamp of approval, he entered the famous laboratories of Virchow, Koch, Chauveau, and Pasteur to complete his technical training. Fortified with such advantages, it was not surprising that he should have made an impression in the struggling profession of America, and it may be said that he has held every post of honor that was within her gift. As editor, teacher, author, medical officer, associationist, and practitioner, he distinguished himself by his great learning and his devotion to her interests, and his death has cast a long shadow over the profession of the country.

Personally, Dr. Huidekoper was a companionable and genial gentleman, who made friends easily and held them firmly, by all of whom his death will be sincerely regretted.

## EUROPEAN CHRONICLES.

TUBERCULOSIS is more than ever the subject of writings, of experiments, and of records of cases of contagion since the question has received a new impulse at the Congress of London, and scientific papers are more or less filled with articles on the subject, whether on human, bovine, or even aviary tuberculosis.

In reference to this last, and to the relation that it has to the disease of many mammalia, I find in the *Giornale della R. S. et Academ. Veterin.*, of Turin, a contribution of Dr. Garino, with the object of adding material to prove the relation of both diseases.

The question is important, and the advocates of both opinions—that the disease is essentially different, or not—belong to the highly scientific world. Devillers, Lenglen, Johne, Nocard, Mollereau, and others have affirmed the possibility of the transmission of the disease of man to fowls, and consequently have admitted the etiological identity of the two forms of tuberculosis. On the other side, Rivolta, Maffucci, Strauss, Gameleia, etc., have advanced a different opinion and consider the two affections as essentially different.

The guinea-pig takes the human disease easily, but is considerably resistant to that of fowls, and that almost natural immunity is considered as a differential character of importance by those who deny the identity of the disease; and Dr. Garino informs us that to determine the value that can be attached to some differential characters between the various forms of tuberculosis he has made several experiments.

To 35 guinea-pigs he has injected cultures of aviary tuberculosis; in 10 under the skin, and 25 in the peritoneal cavity. The first did not develop a generalization of the disease; an abscess with pus, containing bacilli at the point of inoculation, a small ulcer, healing more or less rapidly, and a noticeable loss of weight until the ulcer has begun to cicatrize—that was all. In the others there was progressive loss of flesh until death, and tuberculosis of the omentum and mesentery was found, the tu-

bercles containing bacilli. The other organs were free from disease.

The conclusions derived from this are to show that, after all, the guinea-pig is not so rebellious to aviary contagion, that it takes it as it does the human, and that the relation of both affections are certainly not different.

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But to come back to the new point raised by Prof. Koch. Our friends know that a Royal Commission has been appointed by the English Government, and there is no doubt that with the names that are given of the members, much valuable work can be looked for. Our English colleagues are, besides, taking much interest in the question, and at the recent openings of the veterinary colleges allusions of importance were made, among them those of Prof. Crookshank, the celebrated professor of comparative pathology and bacteriology, and he took the position of agreeing fully with Prof. Koch on the question of infection to man, viz., that "if it occurs at all, it is of very rare occurrence," but was of an entirely different opinion on the subject of human tuberculosis being inoculable to cattle. Koch by his experiments seems to be justified in denying it; Crookshank by his in refuting it.

But how can such contradictory results be explained? No doubt various opinions will be advanced. Nocard expressed his ideas to the Congress; Crookshank gives his; and, after all, it appears likely to prove merely a question of soil. The Professor says: "Man is not the natural soil of bovine tuberculosis. The attempts to transmit human tubercle to cattle would not be uniformly successful." The natural resistance of the tissues may vary, and "an animal may be markedly susceptible to infection with the virus from a foreign soil," by peculiar circumstances, diseased condition or otherwise.

Question of acclimation, question of resisting power, question of soil—all will evidently be carefully considered and studied by all those who are now engaged in the solving of the problem.

I must in connection with this subject mention only to-day that in France the subject has also stimulated the attention of scientists and of practical men. A commission has just been called npon by the Société de Medéciné Veterinaire Pratique (the same body which made experiments on the incubation of tuberculosis, made mention of by me some time ago, and whose report was translated and published in the REVIEW by our friend, Dr. Winchester). The Commission has had a seating, a programme has been laid out, and I hope some day to send you a report of its findings.

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In the meantime, practical records seem to find their way into scientific journals against the theory of Koch. Among them, I may mention the experiments made by the proctor professor of pathology at Owens College, Prof. Sheridan Delipine, who experimented upon four calves with a mixture of several tuberculous sputa, representing several types of human tuberculous sputum. Two of these animals died shortly after the inoculation and could not have been infected by it. The other two lived long enough to allow the definite results to be obtained, and both contracted tuberculosis by the injection of human tuberculous sputum.

Another practical case is also found recorded in the *Progres Veterinaire*, and, although deprived of scientific evidences, is not without interest. A four-year-old steer having shown symptoms of pulmonary and abdominal tuberculosis, was tuberculined, and the diagnosis confirmed. This steer had been raised by the owner, who still had the mother, kept in a barn with two other cows. These three animals being tuberculined answered sound. The great mother of the steer had also been tuberculined, and was sound. How did the steer then get the disease? According to the author, from the son of the owner, who was tuberculous, and who, when taken with violent spasms of coughing, would go into the barn and expectorate. Where? On the bedding of the steer, then a young bull, which doubtless ate the bedding and also the tuberculous sputum of

the young man, whose family and all ancestors had been healthy.

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Now, to close this already long chronicle on the subject of tuberculosis, a few suggestions which I find in one paper, and which I give for what they are worth:

Rules for the regulation of the means for controlling the disease are the order of the day, and the efforts of those who work in that direction are worthy of success. The injunction not to expectorate in public conveyances (stages, omnibuses, tramways, etc.) has been followed by an urgent request to the people, by little bills posted all over the city of Paris, not to spit on the sidewalks. These measures have in them a certain amount of good reason; but what of the law which, it is said, will be asked of the government, and which among its clauses has this: No spitting shall be allowed in government buildings by the functionaries under penalty of dismissal; dry sweeping of the offices shall be replaced by wet cleaning obligatory in all governmental buildings; every official functionary shall have a clean sanitary record; annual statistics shall be made of all functionaries as to their morbidity and mortality, etc., etc.

Of course, the law will never be passed; will it ever be proposed? But, at any rate, it shows to what absurd extremes some may be carried, and be serious in their errors.

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VACCINATION AGAINST DOG DISTEMPER.—In one of my last chronicles I wrote briefly in relation to Dr. Physalix's mode of vaccination against dog distemper, and told of the appointment of a commission to test the value of the new discovery. Experiments were started several months ago, and a meeting of the commission was called recently to discuss the value of those experiments and prepare a report for the Société Pratique. A very serious discussion took place and a somewhat unfavorable interpretation might have been the result had it not been shown that the experiments were not entirely exempt from criticism,

that they had been carried out under unfavorable circumstances, and, besides, to condemn the method in its practical object required a greater number of animals than those that were used. Notwithstanding, if the experiments of the commission, made in contagious kennels, have caused disappointment among the members, the results which have been obtained by Dr. Physalix in private tests are much more satisfactory. Out of 256 dogs which were vaccinated, 13 only have died, a mortality of about 5 per cent. Those tests have been carried out among dogs belonging to packs of private gentlemen. No doubt the principal point is to find out if, in packs of dogs or among breeders, death or permanent invalidity is in the proportion of a third or of half of the pups affected. A comparison will then give the value of the method, which, after all, cannot be absolute in its success no more than any other operation of a similar nature.

At any rate the commission is still at work, and we may hear from it later on. A. L.

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## A SERIOUS MENACE TO VETERINARY PROGRESS.

It is infrequent that a writer or speaker upon the history of veterinary medicine does not enlarge upon the progress made in the last forty years. Certainly this short period will encompass all the material advances so far as the subject refers to America, for it has in that time sprung from virtual charlatanism to an enviable position among the advanced sciences. To the small private college, which sowed good seed, ripening in various States of the Union and bearing excellent fruit, and to the chair of veterinary medicine in the agricultural college, we owe our first obligations. Later on the institutions which came into being as a result of private enterprise, became populous veterinary colleges, with faculties made up of the most successful practitioners of the country. Gradually the cause of comparative medicine in America became a matter of governmental concern, and many of our best schools of to-day are de-

partments of universities, with the same facilities for teaching veterinary science as for human medicine.

Nor did progress confine itself to the education of the individuals of the profession; but the legislatures of various States were asked to enact laws regulating its practice, with the object of finally excluding all those who possessed not a diploma from a recognized college. If our memory is not faulty, the first law recogniziug the veterinary diploma was passed by the State of New York fifteen years ago, in 1886, and steadily one State after another has adopted similar measures, most of them creating veterinary examining boards, which in many instances not only pass upon the proficiency of the candidate for license, but take into serious consideration the quality of the school issuing the diploma, and if the latter does not fulfill the requirements of the board, the candidate is rejected or not examined.

In the various steps leading up to this satisfactory condition of veterinary education at the beginning of the twentieth century, the Empire State has ever been the leader. Not only has she thrown about her profession all the safeguards enumerated, but she has placed her veterinary colleges under the university system, and their matriculants must be satisfactory to the Board of Regents of the State as to the amount of education possessed by them at the time of their entrance upon the study of this profession. When the preliminary requirements are satisfactory the student must spend three sessions of six months each within the walls of one of her colleges, and should he graduate and receive the diploma of the college, he is then in condition to present himself to the Board of Examiners for their license to practice the art to which he has devoted so much time and study. It is by no means a foregone conclusion that this board will ratify the action of the college, as we know of a number of instances where the candidates have been successively rejected, while the character of their *alma mater* was perfectly satisfactory. Graduates of colleges requiring only two sessions cannot, of course, be entertained, and such men who are not already registered in this State cannot practice within he rconfines. All these

elements of veterinary progress have been secured by the efforts of the members of this profession, and when their last bill became a law it was felt that all necessary safeguards had been thrown around the public and the profession, and that quackery and charlatanism would be banished from the realm on the termination of the lives of those who were registered "by affidavit."

The stringency of the requirements to obtain license to practice in New York State has had the effect of greatly reducing the number of those applying for that privilege; there were not more than half a dozen at the last session of the examiners. While this effect is everywhere manifest, information keeps reaching the REVIEW from various sections that men are opening up and practicing veterinary medicine and surgery without diploma, registration, or any other qualification than cheek and a sense of security from molestation.

The REVIEW for September, 1900, brought this subject to the attention of its New York readers, and in October of the same year the writer presented the matter as vigorously as possible to the New York State Society, making certain suggestions as to a means of thwarting the steady growth of these charlatans by energetically prosecuting them. The law is very clear upon the offense, and it only needs the vigorous application of the penalty in a number of cases, and generous vigilance over suspects, to put an end to it. The State Society discussed the subject in a half-hearted manner and disposed of it by directing its Executive Committee to prosecute such offenses. This committee is made up of private practitioners who have neither time nor disposition to travel over the State in search of violators, and the matter had just as well have been tabled as to make such a disposition of it.

It is a standing menace to the integrity of our laws and to our much vaunted progress that men of this character are allowed to pursue their course with perfect freedom, and until it is taken hold of by the State Society in a spirit to accomplish something it will continue to increase.

The REVIEW will be glad to print the views of its readers

as to the best means of dealing with the subject, and will guarantee to bring the matter before the Society next September, embodying the best of these suggestions.

## VETERINARY PROGRESS IN THE PHILIPPINES.

There has been organized at Manila the Philippine Veterinary Medical Association, and the very good working basis of fourteen members have signed the constitution and by-laws. Dr. W. R. L. Best, was elected President; Dr. J. A. Tucker, Vice-President; Dr. M. H. Meekie, Treasurer, and Dr. W. W. Richards, Secretary. A number of committees were appointed, and we may soon expect some interesting literature upon the diseases of this new possession of Uncle Sam's. The REVIEW has been publishing from time to time articles upon the peculiar diseases found by our veterinarians among the horses and mules which are native, and which are contracted there by those brought from America, there being in this number a valuable one from Dr. John G. Slee, of the Manila Board of Health. Dr. Coleman Nockolds, of the U. S. Cavalry, located at Batangas, has also furnished a number of papers for the benefit of our readers. Recently he described the disease "Surra," as he found it, and we have in hand awaiting publication in the February nnmber, a further study of this malady. With the advent of the new association, a more systematic study of the etiology, pathology, and treatment of these and other affections found among the animals in that country can be undertaken, and by that interchange of experience and observation which can only take place through the discussions of such an association, a correct and rational estimate of the characteristics of the morbid processes can be arrived at. We congratulate our brethren upon this wise step, and wish to assure them that the REVIEW will be ever ready to assist them in so far as lies in its power.

## BACK NUMBERS OF THE REVIEW.

We would be very much pleased to have our subscribers read the notice at the foot of the last page of reading matter in

this number of the REVIEW, entitled "REVIEWS Wanted," as the publishers are very much in earnest in their efforts to secure the numbers sought, since it is to fill orders for many highly-esteemed members of the profession who are anxious to have their volumes bound. We trust, therefore, that those readers who may have duplicate copies of certain numbers of 1900 and 1901 will send them in to the office of publication, and we shall be only too glad to forward the amount offered in the notice referred to.

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"SOCIETY MEETINGS" is a well-filled department of the REVIEW this month, and the secretaries have vied with each other in making their reports of value to the reader, since they have summarized the proceedings in such a manner that the valuable scientific and practical points stand out in a comprehensive manner. If we can only keep this good work up, a bound volume of the REVIEW will constitute a perfect history of the work of the associations of the country for the year. The secretaries are asked to regard the pages of this journal as their property, and to remember that they are largely the makers of contemporaneous veterinary literature.

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DR. J. V. LADDEY, of Arlington, N. J., will present an important communication to the Veterinary Medical Association of New Jersey, at the meeting which occurs at Trenton, on the 9th inst., entitled "The X-Ray as an Aid in the Diagnosis of Tuberculosis in Cattle." The doctor has done considerable experimentation along this line, and has met with very satisfactory results, the story of which is told in a series of photographs and radiagraphs. The REVIEW will publish the paper, with full illustrations, in the February number.

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THE SWINE BREEDER'S ASSOCIATION OF NEBRASKA announce a paper for its annual meeting to be held in January, by Dr. S. Stewart, of Kansas City.

# ORIGINAL ARTICLES.

## PRACTICAL ANTISEPSIS IN SURGERY.

By G. A. Johnson, D. V. M., Sioux City, Iowa.

During the last quarter of the 19th century surgery has made such rapid progress that now major and difficult operations are taken as matters of fact and have ceased to be the wonder of the times; especially is this true in surgery of mankind.

This marvellous progress is very largely due to a better knowledge of the rôle played by micro-organisms in the process of wound repair. Medical literature is replete with treatises ranging from the short essay to the voluminous text-book, upon the subject of antisepsis in its various forms. While the surgeons of the human school have succeeded in gaining a position nearer that of perfection than have those of the veterinary school, it is not to be understood that veterinary surgery has not made great progress.

We have naught but commendation for the veterinary surgeon, who, being desirous of advancing his profession and establishing a reputation for himself, by attempting to follow the methods and *modus operandi* of the eminent surgeon of mankind and counselling his colleagues to go and do likewise, nor is it strange that in so doing he should at times have been carried beyond the essential landmarks of his profession by the swirl of "the pace that kills," in attempting to get similar results where conditions are so materially different as they are between the human and the brute patient.

From a clinical view point we may consider wounds as surgical or accidental; surgical wounds are such as result from surgical operations,—all others as accidental.

While it is not within the province of this paper to enter into a discussion of the physiological or pathological phenomena of the process of repair, a short discussion of the classification of these phenomena may not be out of place.

From a physiological view point there is no material difference in the phenomena that take place when a wound is immediately closed and normal relations are resumed in a few days, without the formation of pus, and in one that remains open and pus is formed. The difference is one of degree rather than of kind.

From a pathological view point there are two classes of wounds: aseptic and infected. Surgeons of the human school are quite generally agreed to use the pathological classification, whereby all wounds are considered to heal by primary or secondary intention. That is, all aseptic wounds are said to heal by first intention, primary or immediate union, no matter how much time may be required for the completion of the process of repair provided it is accomplished without the formation of pus, while all infected wounds, that is, wounds where the process of repair is accompanied by the formation of pus, are said to heal by secondary intention or granulation. But from a clinical view point are not veterinarians justified in dividing class one into two subdivisions, thereby having three classes of wound repair? Thus, in class one we would have healing by first intention, primary or immediate union, where the aseptic parts are brought into close apposition and the normal functions are resumed in a few days. In class two, or healing by secondary intention, where the parts of an aseptic wound cannot be brought or kept in close coaptation, but where the process of repair is carried to completion without the formation of pus; and class three, or union by granulation, where the process of repair is accompanied by the formation of pus. Thus we would have two classes of repair in aseptic wounds and one class in infected wounds.

While this classification is purely an arbitrary one, I believe its retention will give lucidity, hence its use in this paper.

It should be the desire of every surgeon to have all of his cases recover as rapidly and with as little inconvenience to his patient or its owner as possible; that is, to have all of his operations terminate by primary union when possible.

This being the pinnacle of perfection, let us briefly consider the conditions that are necessary for its success. Healing by primary or immediate union depends upon three conditions, namely: Asepsis, coaptation of the parts, and physiological rest. The healing of a wound by primary union might be likened to the erection of an edifice upon a tripod; if one or more of the legs of the tripod are broken, down comes the structure. Asepsis, coaptation and physiological rest form the tripod that sustains healing by immediate union, and the least defect in either of them renders such an union an impossibility.

The conditions necessary for healing by secondary intention is that the wound be kept aseptic.

The surgeon of the human school can usually acquire an aseptic wound through the use of a disinfected operating room, sterilized instruments and dressings, close attention to the disinfection of the person of the patient, its clothing, bedding, etc., and of himself and his assistants; by means of position, ligation, torsion and wiping he can control hæmorrhage, free the wound of blood clots and serum; and with sutures, buried and otherwise, he can usually coapt the parts; uniting muscle to muscle, tendon to tendon, and bone to bone. And through the submissive and usually assisting disposition of the patient supported by bandages, splints, etc., he can generally secure the necessary physiological rest. But veterinary practice presents a field strikingly in contrast to that of the surgeon of mankind.

The veterinary surgeon may be so fortunately situated as to have all of the accessories to his work as favorable to good results as the surgeon in human practice, but when it comes to the patient, instead of having a usually submissive and assisting subject, he has a defensive combatant from start to finish. But to the ordinary veterinary surgeon, with his patient cast on the windy side of a barn upon some old musty hay or straw, or, as more frequently is the case, on the bare ground, which is either muddy or dusty, with no opportunity for properly disinfecting the body of his patient, with dirty assistants and the gentle

zephyrs scattering germ-laden particles of dust in all directions, an aseptic wound means much.

But let us presume that he has succeeded in performing an aseptic operation, the impossibility of securing and maintaining coaptation of the parts, in most wounds, precludes healing by first intention, while on the other hand, if he has succeeded in getting good apposition of the parts of an aseptic wound, can he control the patient so as to secure physiological rest, except in a few special regions?

Accidental wounds are usually infected, and it is only by strict observance of the principles of antisepsis that surgical wounds are kept aseptic.

In operating, I usually follow as closely as circumstances will permit the following lines:

(1) Proper dieting of the patient.

(2) Cleansing and disinfecting the field of operation, (*a*) removal of the hair, (*b*) washing the parts with soap and water, (*c*) washing with a disinfectant. For this purpose I prefer crude (full strength) creolin, well rubbed in over the field of operation and allowed to remain from three to five minutes and then washed off. If allowed to remain too long it will produce too much irritation, resulting in œdema of the parts. After the first application of the creolin has been washed off, I usually apply a very small quantity of creolin to the wet surface and allow this to remain until I am ready to operate.

(3) Such sterilized instruments as are likely to be needed during the operation are placed in a tray containing a 1 per cent. solution of formalin.

(4) (*a*) Confining the animal by casting or otherwise, (*b*) giving the parts a final washing with sterilized water or a weak solution of creolin. I usually apply a very light coating of creolin over quite a surface surrounding the field of operation with a view of preventing hands or instruments from becoming infected by accidentally coming in contact with these parts.

(5) Disinfection of the hands; usually I rub my hands

with some crude creolin, then wash them, seeing that the nails are well cleaned, then wash with a 1 per cent. solution of formalin.

(6) The operation, including hæmostasis.

(7) Dressing the wound, remove all blood clots, shreds of tissue and stop seeping as much as possible by gently wiping with pledgets of cotton or gauze. The further dressing depends very largely upon the location or character of the wound. If the wound is such that the parts can be brought into close apposition and retained thus, I put into the cavity a limited quantity of some non-irritating, prohibitive antiseptic, as boracic acid or iodoform, that will not interfere with immediate union, but that will have a tendency to arrest the development of any germs that may have accidentally found lodgment in the wound. Then fix the parts by means of aseptic sutures, cover the parts with some of the same or similar powder as used in the wound and over this apply a quantity of gauze or absorbent cotton, upon which has been applied a goodly quantity of a similar powder, and retain this in place with bandages.

If the wound is such that the parts cannot be brought into apposition or be kept so, but where the edges of the skin may be brought together, fill the cavity thus formed with a non-irritating antiseptic powder and suture the skin, and if practical, apply a protective dressing of gauze and bandages.

But if the gauze and bandages cannot be applied, a coating of antiseptic collodion or wound gelatin may be applied over the wound.

Remove the dressing and sutures as soon as there is any evidence of the sutures giving way or that the wound has become infected; cleanse the wound and repeat the treatment as at first.

To illustrate, I will cite the treatment of a case of scirrhous cord in a horse. The horse having been dieted for a couple of days was cast and operated upon under chloroform anæsthesia with antiseptic precautions, as above outlined. An egg-shaped tumor about 6 inches long by 4 inches in diameter was

removed, leaving a cavity so large as to preclude coaptation of the parts. The wound was cleansed of blood clots, shreds, etc., and seeping partially checked by means of wiping with gauze and a powder composed of about three drachms each of boracic acid and acetanilid was put into the cavity and the wound in the skin closed with sutures, and the parts well dusted with some of the same powder as used in the wound. The animal was allowed to get up and was placed in a box stall in a large boarding barn and placed upon a light diet for a few days. The case made a rapid and complete recovery; was driven on the tenth day after the operation.

Following the operation there was no fever, loss of appetite or swelling of the parts, other than a slight œdema of the sheath; no pus was formed except some around the sutures about a week after the operation, notwithstanding the fact that on the second day after operating I introduced my finger between the sutures, breaking down the adhesions to allow the escape of a small quantity of serum that had collected in the cavity. The only other treatment used was the daily application of cold water from a hose attached to a city hydrant.

The same *modus operandi*, except the dieting, was followed in the castration of a cryptorchid, and in the removal of a tumor from the breast of a horse; the tumor case made a rapid recovery, leaving but a slight scar, but I never heard from the castration case after the operation.

In wounds, where there is a large cavity, but where the powder and sutures cannot be applied with a reasonable assurance of success, pack the cavity with antiseptic gauze or absorbent cotton. I prefer the gauze, as it is easier to introduce, it is retained better and can be withdrawn with less trouble; the desired amount of liquid or powdered antiseptic can be applied to, or within the folds of, the gauze. This packing should be changed as frequently as the case demands, usually once a day or every second day.

I have treated two cases of fistula of the withers and one abscess of the shoulder by this method with good results.

In wounds where a large quantity of skin has been destroyed disinfect the wound and dust freely with some desiccating antiseptic powder, frequently enough to secure healing under a dry crust or scab. For this purpose Dr. Frick recommends a powder composed of iodoform and pulverized sugar, equal parts.

In the treatment of open joint, the opening should not be allowed to close until the interior of the joint has been rendered aseptic. This may be accomplished in ordinary cases, where the destructive process has not advanced sufficiently to destroy the articular cartilage, by thoroughly washing out the joint with proper antiseptics and protecting the external wound with a powdered antiseptic, reinforced by a dressing of gauze and bandages when practical.

For this class of cases I prefer a corrosive sublimate solution (one to from 1000 to 5000 parts).

If the wound cannot be thoroughly cleansed through the original opening, make one or more other openings that will admit of this being accomplished. Other accessory treatment, such as internal medication, splints for immobilizing the parts, slings, etc., should be used according to the indications of each case and the temperament of the patient.

In treating infected wounds, the first step should be to thoroughly wash the parts (wound and surrounding region) with soap and water, and cleanse with an antiseptic solution, then by means of a knife, scissors, or curette, remove all foreign bodies, shreds, necrosed or lacerated tissues, exuberant granulations, etc.

Then wash the wound with an antiseptic solution until the contaminating germs are destroyed. Then treat according to the indications of the case; in other words, render the septic wound aseptic and treat accordingly.

I am of the opinion that we frequently fail in our attempts to cleanse infected wounds, because we do not apply active germicidal remedies for a sufficient length of time to destroy all germ life. But better results will follow the application of a solution of medium strength for a longer time, than of a stronger

solution for a shorter time. On the other hand, it is of very little practical value to render a wound aseptic and permit it to immediately become reinfected.

It is quite generally agreed by veterinary surgeons that it is impracticable, if not impossible, to obtain sufficient immobility of the parts to secure healing by primary union, except in a few regions, as the lower part of the extremities, the inguinal region, the face and the ears.

But this should not deter us from employing the principles of antisepsis, but we should bend our energies toward making the theory apply to the case, rather than trying to make the case fit the theory. There is no question but that we should attempt to secure union by first intention when and wherever practical. But when this cannot be reasonably expected, we should try to secure union by secondary intention, that is, healing by granulation without pus, for the formation of pus indicates a destructive process, and its presence always retards the process of repair.

Judging from results so far obtained, I am led to believe that a majority of wounds that domestic animals are subject to, may be healed by secondary union, through the use of large quantities of non-irritating antiseptics in the form of a powder or gauze packing. By the use of a sufficient quantity of a preparation that will not interfere with the process of repair, but that will check the development of, if it does not destroy, pathogenic organisms, we not only prevent the introduction of germs, but also arrest the development of such as may have found lodgment within the wound.

As a rule, a dry dressing is preferable to a liquid dressing for wounds that are expected to heal under a scab, because it will form a better protection by remaining upon the surface better and longer.

While surgeons are quite generally agreed that hydrargyri bichloride cor. stands at the head of the list of chemical disinfectants, the selection of the agent used will ever remain largely one of personal choice of the surgeon. Personally I prefer creolin

for disinfecting the field of operation, especially in practice out side of a hospital, because of its easy application, not requiring so many vessels to properly carry on the work.

For packing large cavities we need a prohibitive germicide, that is cheap, that is light and bulky, that will not irritate the parts, that is not too astringent, that will not act as a foreign body, that will not dissolve too rapidly, that will not produce unfavorable systemic disturbances, but will prevent germ development.

A combination of boracic acid and acetanilid will prevent germ development, but it dissolves too rapidly and it has a tendency to stimulate a serous exudate in the wound. Iodoform is too expensive, too heavy and may produce too great systemic disturbances when used in large quantities.

I am of the opinion that a combination of two or more drugs of this class that have different degrees of solubility and systemic action, will give better results than any one remedy that is on the market at the present time, although I have not as yet had an opportunity to use glutol (a combination of gelatin and formalin), a remedy that has recently come into use in human practice for packing cavities where the parts cannot be coapted, nor iodide of starch, a preparation that seems to have a number of the essential attributes.

Cheese cloth, a thin gauzy cloth, that can be purchased at any dry goods store for from three to five cents per yard, when thoroughly boiled in a solution of sodium chloride or boracic acid, and dried in an oven, will answer all purposes equally as well as the higher priced medicated or surgical gauzes on the market. For sterilizing instruments and dressings such as absorbent cotton, gauzes and bandages, nothing is so efficient as moist or dry heat.

The application of accessory treatment, such as bandages, splints, etc., and the use of sling will depend largely upon the character of the wound and the temperament of the patient.

The objects obtained by this line of treatment are reducing to a minimum of the liability of septicæmic and pyæmic

complications, a more rapid recovery, leaves less scar and requires less care and attention in the treatment of the wound.

This paper has been prepared more especially with reference to the treatment of wounds in the larger domestic animals, but the principles of antisepsis apply equally as well to the smaller animals, differing only in the special application.

In conclusion, a most vital point is, that the surgeon should never lose sight of the fact that while a theory or principle is usually broad enough to cover all cases, no set rule can be successfully adopted, but that each and every case should be treated according to its special indication.

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SANITARY ADVANCE IN NEW JERSEY.—At the recent annual meeting of the New Jersey Sanitary Association at Lakewood a Committee on Animal Diseases and Animal Food was established. Dr. William Herbert Lowe, of Paterson, President of the Veterinary Medical Association of New Jersey, was appointed chairman. We are glad to note that the sanitarians of New Jersey recognize the importance of the application of veterinary science in their work and its relation to the public health. Dr. D. E. Salmon, Washington, D. C., Chief of the Bureau of Animal Industry, is chairman of a similar committee of the American Public Health Association, and has just issued a valuable report on the "Relation of Bovine Tuberculosis to the Public Health."

VETERINARY LEGISLATION IN NEW JERSEY. — The Committee on Legislation of the Veterinary Medical Association of New Jersey met in Newark, Dec. 9th, with Dr. T. Earle Budd, Orange, Chairman; Dr. T. E. Smith, Jersey City; Dr. Henry Vander Roest, Newark, and Dr. Wm. Herbert Lowe, of Paterson, present. Dr. Vander Roest was elected Secretary of the Committee. President Lowe submitted a draft of a bill entitled "An Act to establish a State Board of Veterinary Medical Examiners to regulate the practise of veterinary medicine and surgery in the State of New Jersey," which was approved. The Committee will recommend the adoption of this bill at the forthcoming meeting of the Veterinary Medical Association of New Jersey at Trenton, January 9th, and its introduction in the legislature in January soon after the meeting of the State Association. The veterinarians of New Jersey are well organized, and the prospects of securing the desired legislation are good.

# PROGRESS IN VETERINARY MEDICINE IN ITS RELATION TO HYGIENE.*

By Dr. William Herbert Lowe, Paterson, N. J.
*President of the Veterinary Medical Association of New Jersey.*

The progress made in veterinary medicine in its relation to hygiene, as well as in many other respects, during the last few years, has been constant and amazing, and shows that the two great branches of medical science—human and animal—are inseparable. This fact, I believe, is recognized by scientists the world over. The leading veterinary colleges of America are no longer independent institutions, but have become departments of great universities. Cornell and the University of Pennsylvania have each a veterinary department, and New York University has recently established a veterinary department. This department is the result of the union of the two oldest veterinary colleges in this country, viz., The New York College of Veterinary Surgeons with the American Veterinary College and the adoption of the consolidated institution as a school of the New York University, under the title of The New York-American Veterinary College.

Comparative anatomy, comparative physiology, comparative pathology, bacteriology, entomology, animal parasites and parasitism, chemistry, physics, meat and milk inspection and sanitary science are among the subjects found in the curricula of the recognized veterinary schools of to-day.

Harvey's discovery of the action of the heart and the circulation of the blood by experiments made upon living animals; Jenner's discovery of vaccination and announcement that smallpox might be prevented by inoculation with the virus of cowpox are well known examples of the inestimable value to mankind of a scientific study of animal life in connection with experimentation. In fact, it might be said that it was by the student entering the domain of comparative or veterinary medi-

* A paper read before the New Jersey Sanitary Association, at Lakewood, N. J., Dec. 7th, 1901.

cine that many of the now known scientific facts were discovered and demonstrated, and as many of the diseases of animals are transmissible to man the subject assumes an importance of no small proportion when considered from the standpoint of hygiene or public health. Well, indeed, may the New Jersey Sanitary Association give consideration to this subject.

By investigations and experiments conducted by veterinarians on Texas fever of cattle it was found that cattle in the infective district carried in their blood the contagion of Texas fever; that it was due to a protozoan organism, *Pyrosoma bigeminum*, analogous to the parasite of human malaria, and that this parasite was transferred to susceptible cattle outside the infected district by the Southern cattle-tick, *Boöphilus bovis*. The experiments alluded to are interesting to the scientific investigator and make a remarkable chapter in the progress of medical science. They have already led to extensive studies of the part played by insects in the propagation of human diseases and particularly malarial fevers, opening up a new field in medical research, by which it was discovered that mosquitoes are responsible for spreading malaria.

No fact has drawn a closer relation between animal and human diseases or the protection of the public health through domestic animals than the introduction of the antitoxin principles of serumtherapy. The immunizing of animals against fatal contagious diseases; the rapid and certain diagnosis of latent diseases, which cannot be known by physical symptoms, and their early isolation before they have spread their disease germs among their kind, and to the human family; the cure of some diseases by the administration of repeated doses of attenuated virus and the prevention of development of disease by their early administration are phases of veterinary science which make it a great preserver of the public health. Contemplate for a moment the importance of tuberculin used for the diagnosis of tuberculosis in dairy cattle; mallein used for the diagnosis of latent glanders in the horse; vaccine employed to protect mankind from small-pox; tetanus antitoxin employed in

the treatment of lockjaw; diphtheria antitoxin employed in the treatment of diphtheria, as well as other antitoxins employed in the treatment of anthrax, rabies and other diseases. It is impossible to estimate the value of animal serums to mankind employed for diagnostic, prophylactic and therapeutic purposes.

The position taken by Professor Koch in the recent British Congress on Tuberculosis has awakened a great deal of interest in the question of the transmissibility of the tubercle bacillus from animal to man and from man to animal.

The experiments showing the difficulty or the impossibility of transmitting human tuberculosis to cattle in a fatal form cannot be accepted as evidence that the bovine bacillus, which is far more virulent and fatal for many animals, cannot infect man. On the contrary, the greater disease-producing power of the bovine bacillus would appear to make it more dangerous for human beings as well as for lower animals.

The evidence showing the practical impossibility of cattle being infected with human tuberculosis under ordinary conditions is a great encouragement for the eradication of bovine tuberculosis, since it proves that the danger so often feared that cattle if freed from the disease would be immediately reinfected from mankind, does not exist in fact, and need not be considered.

Even if it were true that bovine tuberculosis is not communicable to man it would nevertheless be to the interest of cattle and swine growers to have the disease eradicated as an economic measure; and such eradication would also be to the interest of the public, since it would have great effect as a means of preserving the food supply of the nation and of protecting consumers from the unwholesome products of diseased animals.

The communicability of tuberculosis received its full share of attention at the recent annual meeting of the American Veterinary Medical Association held at Atlantic City last September, and resolutions were adopted expressing the sense of

the association as above. I might state that a number of veterinarians are making a series of experiments at the present time that promise to be of no little value to science and mankind. Some of these experiments, I am glad to say, are being made in our own State by the Public Health Committee of the Veterinary Medical Association of New Jersey.

The last Legislature enacted a pure food law and put the execution of the law under the control of the State Board of Health, and I hope that ample provision is made in said law for necessary veterinary inspection of all food animals as well as animal food products. The qualified veterinarian is the expert on this subject. This association can do much to enlighten the general public on veterinary hygiene and sanitation, and I regard the same as an important function of this organization.

All dairies should be regularly inspected by a competent veterinarian. The cattle should be examined as to their health and the attendants as to their own healthfulness and cleanliness; the stable should have sufficient air space, be well lighted, ventilated and drained; the quality and kind of food is important, and the water supply should be uncontaminated. Milk is often tainted, contaminated or infected after it is drawn from the cow. The whole system of producing, handling and marketing milk, is being revolutionized and great improvement has already been made in many dairies by enterprising producers.

Milk is pure while in the udder of a healthy cow, but the moment exposed impurities soon deteriorate it. It should be conveyed to the milk house as soon as drawn. Care must be taken that the water is not polluted in which the milk cans and utensils are washed, for it is in this way that epidemics of typhoid are sometimes started. No dairyman should give medicine to a cow and allow the milk to be used, especially for children. The use of various preparations of mercury, arsenic, zinc, iron, iodine, purgatives and other medicines easily cause fatal results. I am of opinion that practitioners of human medicine might in certain maladies oft heir patients, especially of children, admin-

ister medicine to their patients through the agency of a cow by her milk.

The importance of meat inspection is becoming more evident every day. A layman or butcher is not qualified to do work of this character. It requires the services of the veterinary expert. The danger is not so much from meat of inferior quality, or even from putrid meat, as it is from fresh meat containing micro-organisms of communicable diseases. Certain parasites (*Cysticercus cellulosa* and *C. bovis*) are directly transmissible to man through the use of meat. The veterinarian with a knowledge of these worms is able to prevent the spread of their tapeworm stage among human beings by condemning the infested meat or subjecting it to processes which will render it harmless. The rigid system of meat inspection in Germany has resulted in an actual decrease in tapeworm disease (by *Tænia solium* and probably also by *T. saginata*) in man and in their frequency of *C. cellulosæ* in the human eye.

Condemnation and destruction of organs infested with cer tain other parasites (*Echinococcus*, *Cœnurus*, *Cysticercus tenuicollis*) will prevent the spread of those parasites in their tape worm stage to dogs, and by that means prevent the reinfection of man (*by echinococcus*), and of domesticated animals (*by echinococcus*, *Cœnurus*, *Cysticercus tenuicollis*); in this case prevention of tapeworm disease in dogs, though of comparatively little importance so far as the dogs are concerned, becomes very important not only in public hygiene (in the prevention of disease in man and animals), but also from an economic standpoint, preventing financial loss to stock-raisers from disease and death in their herds and flocks caused by the worms. The destruction of livers heavily infected with flukes will also result indirectly in decreasing fluke diseases in man and animals. I would refer those interested to an exhaustive work on the subject compiled by the Bureau of Animal Industry, some of the data of which I have incorporated in this paper.

Pork before being put on the market should be examined microscopically for a minute worm called *trichina spiralis*,

which causes the disease known as trichinosis. As a secondary precaution, no pork should be eaten unless it has been thoroughly cooked throughout, so as to kill any parasites which may exist in it. The pernicious and most unsanitary practice of feeding swine with garbage should be prohibited, as it induces disease in that animal whose carcass constitutes a large portion of our food resources.

Cold storage, cooking or salting will destroy the parasites of certain diseases. In other cases the meat should be "tanked" and converted into fertilizer. In each city and town the slaughtering should all be done at one abattoir, and that abattoir should be constructed upon sanitary principles. There should be a competent veterinary inspector appointed as director in every slaughter-house, with assistants if necessary.

Veterinary inspection of meat is now being efficiently carried out on a large scale for inter-state and foreign trade by the U. S. Bureau of Animal Industry. Meat inspection should be carried out along the same lines by every city and town in New Jersey. The State, and every city and township board of health, should have at least one veterinarian officially connected with it. Veterinarians should be appointed on boards of health as well as physicians and others, for no small part of preventive medicine and sanitary science belong essentially to the veterinary profession.

I take a deep interest in this association, because it brings together members of several professions interested in a common cause.

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THE NEBRASKA STATE VETERINARY ASSOCIATION holds its next meeting at Lincoln, Neb., January 23d.

A VERY CHEERFUL SIGHT to Brooklyn veterinarians is the transformation of a very large storeroom on Bedford Avenue from a "busted" automobile wareroom to a successful harness and horse goods bazaar.

THE class of 1903 of the N. Y.–A. V. C., have adopted a new class pin, having a horse's skeleton head, surmounted by two crossed femurs, upon the red cross of medicine, and with the University purple as a background.

# CLINICAL OBSERVATIONS ON ROARING.

By W. L. Williams, Professor of Surgery, New York State Veterinary College.

In the Review for July, 1900 (Vol. XXIV, p. 240), Dr. Liautard presents a brief *résumé* of discussions upon the question of the heredity of roaring by such eminent scientists as Nocard, Lavalard, Cagny, Barrier, and Labat. The latter of these clings to the belief in a hereditary predisposition. Much confusion has been caused by including under the term "roaring" all cases of disease resulting in a loud roaring noise during exertion, a heterogeneous collection of maladies of the greatest possible variety and scarcely related in any way.

For our purposes we shall restrict the term to the predominant pathologic condition causing this symptom, consisting of paralysis and atrophy of the muscles supplied by the left recurrent laryngeal nerve, and which upon investigation show no sufficient cause for the paralysis, such as the pressure of a tumor on the nerve or the separation of the nerve, owing to a traumatism.

In the article above quoted the query is put, "Why should 'Ormonde,' himself a roarer, produce roarers when in England and when taken to America *not have one* roarer to his credit?" Other cases of confirmed roarers used as breeders without producing roarers are cited. The query concerning "Ormonde" is significant. Why did his British progeny "inherit" his defect and his American produce remain free? If we admit "heredity" as the ruling factor we should have to conclude that there was a hereditary predisposition in the American mares against roaring which was greater than "Ormonde's" pro-roaring tendencies. But the American mares were probably from British stock in which roaring has been common throughout history, and the question arises then whether the mares in South America had acquired an immunity against the malady.

This at once raises the question of climatic influence on roaring, and unfortunately we have no statistics at hand to affirm or deny such suggestion. In the writer's observations, how-

ever, climate does seem to exert a powerful influence, though no exact data have been preserved. During 12 years' practice in central Illinois in an agricultural region largely devoted to horse breeding and chiefly to heavy draft horses, roaring was rarely seen, probably one case a year was presented. In Montana, in a location where there were a great many horses, three roarers can be recalled during a period of as many years. At the free clinic of the New York State Veterinary College, 25 roarers have been presented among 3500 surgical patients.

These figures are suggestive, but may be faulty. If true, they argue against heredity, for, so far as the writer can judge, the belief in heredity and the care exercised to prevent transmission is most evident where the disease is most prevalent.

If heredity is the prevailing factor in producing roaring, it would seem it should appear often at birth, and the frequency of advent should decline with age, but not wholly cease, but in practice we see it occur between 3 and 6 years, and rarely outside this range.

Heredity should not, it seems to us, have any great preference for one sex as against another in case of a disease affecting an organ having comparatively slight sexual attributes, or if the sexuality has much to do with the heredity then the desexualization should act as a barrier against the disease. The 25 cases entered in our clinic were as follows: Geldings, 17; mares, 5; stallions, 3.

| | Number of cases which would result if all sexes were equally susceptible. | Actual number of cases occurring. | Ratio of cases occurring to an equal occurrence without relation to sex. |
|---|---|---|---|
| 6000 mares. | 15 | 5 | 1:3 |
| 3950 geldings. | 9.875 | 17 | 2:1 |
| 50 stallions. | .125 | 3 | 24.1 |
| | 25. | 25 | |

The proportion of stallions, mares and geldings per 1000 in this community can only be estimated, and the following

would, perhaps, be approximately correct: Mares, 600; geldings, 395; stallions, 5.

If we assume for purposes of study that our 25 cases would exist among 10,000 horses then the following table would show the inequality of vulnerability to roaring as influenced by sex:

These very brief data may be quite misleading, but they are in our judgment in accord with our prior observations where no statistics were preserved, unless that the ratio of stallions affected is too low.

If roaring is hereditary, environment should play little, if any part, in determining the absence or presence of a disease, but in our observations *we have never seen roaring in an unhoused horse.* This is interesting in conjunction with the data above given as to sex. Stallions are as a rule constantly stabled. Geldings are used for work purposes only, and are largely sold into cities and quite constantly stabled, while a large proportion of mares are kept on farms and are more largely allowed the freedom of the pasture.

These, to us, are the chief arguments against the heredity of roaring, while probably the chief, if not the only weighty evidence for heredity, is the frequent occurrence of roaring among the progeny of affected parents, but if climate and housing exert a distinct influence upon its cause or prevention, then it must largely destroy the value of this fact as a proof of heredity. If given climate, food, housing or other environment causes or prevents roaring, then if these conditions be present roaring naturally ensues if parents be roarers, and equally so if they are not roarers, and the strongest suggestion of the probable advent of roaring in a young horse would be that his sire or dam contracted the disease under the same conditions in which he is placed.

The question needs careful study. In horse shows stallions which roar are excluded from competition, but their progeny, shown without their sire, are eligible! If the disease is hereditary the action is hypocritical, if not hereditary much injury is done by damaging the repute of excellent sires.

Another point of interest in relation to the diagnosis of roaring has been developed in our clinic. In differential diagnosis veterinary writers rely upon the peculiarity of the sound when a horse is exerted, the absence of tumors, constrictions etc., of the air passages, and finally for a definite decision upon the use of the costly and complex laryngoscope or even to laryngotomy and direct ocular observation. We have discarded these in our clinic and rely upon external digital exploration, our technique being as follows: the surgeon approaches the horse, say, first on the left side and places himself beside the animal's neck, looking in the same direction as the horse, the patient's head being held moderately extended by an assistant. Place the palm of the right hand against the left lateral surface of the larynx, the index and second fingers close together and pressed tightly against the larynx, the third and fourth fingers separated from these and passing loosely out of the way toward the ear, while the thumb extends downwards and forwards outside the angle of the inferior maxilla; press the index and second fingers forward along the larynx until the upper or anterior border of the wing of the thyroid cartilage is reached and passed, when if the posterior crycoarytenoid muscles are atrophied a cavity is felt and the arytenoid cartilage is readily pushed inwards, offering no elasticity but being shoved away as an inert body. For comparison pass to the *right* side of the horse, and now use the *left* hand in the same manner as above directed for the right hand, when if the parts are normal there will be distinguished a fullness over the arytenoid region, and while the cartilage can be pushed inwards it does not so readily pass and reveals a distinct elastic resistance. A very little practice renders the examination easy and the conclusion safe. This method of diagnosis offers numerous advantages:

1. It is quicker and much less spectacular.

2. It avoids much trouble frequently by doing away with the necessity for galloping a horse which possibly is unbroken or for some other reason is impracticable or inconvenient. The

horse can be examined safely in stable or paddock by day or night.

3. Perhaps the most potent reason for this method of examination will be found to lie in the probability that hemiplegia and atrophy exists for months in many cases before repeated severe exertion develops the dyspnœa and hence our ability to detect the disease by the usual means, while digital exploration will detect the malady in its earlier stages.

We make our diagnoses and prepare for operation upon this digital exploration alone and if the patient is exerted at all it is merely to test the intensity of the dyspnœa as a matter of curiosity rather than of scientific importance.

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SUIT AGAINST A VETERINARIAN.—English clients hold their veterinary advisers to strict account, if we may judge by the frequent litigations which they are called upon to defend. A cab proprietor owned a mare which became choked upon a potato which she was seen to take from a basket in the stable yard. Drinking water returning by the nostrils when administered and inappetence for food caused the owner to send her to his veterinarian's infirmary, Arthur Ellison, of Harrogate, who administered oil, etc., without success. He then passed the probang, which obstructed in the thoracic portion of the œsophagus, and he could not dislodge the object. The same was done the next day, with similar success. He then decided to allow nature to take its course as the mare appeared better, and returned her to the owner, who also considered her improved. That night she was worse. Again the probang was passed, this time with the corkscrew stiletto, and succeeded in removing the potato; but told owner it was too late as patient had septic pneumonia. Another practitioner was called in, who, when she died, held a post-mortem, and found not only septic pneumonia, but a ruptured œsophagus. Dr. Ellison was not invited to the autopsy. Owner sued Ellison for £50. Jury returned verdict for defendant, with costs and allowances for scientific experts. A point of the prosecution was that the horse should have been "cast" for the operation of passing the probang. (!)

DR. W. L. WILLIAMS, of the New York State Veterinary College, has been appointed by by the Mayor of Ithaca a member of the Municipal Board of Health. We understand that the honor of the position is far in excess of the salary.

# A RETROSPECT OF THE CONTROVERSY REGARDING THE EFFICIENCY OF THE TUBERCULIN TEST.

By J. C. Burneson, Veterinarian, Ohio Agricultural Experiment Station, Wooster, Ohio.

That the tuberculin test is a "bone of contention" among many herd-owners is a universal fact. Every good thing which has been brought before the people since the beginning of the world has had its pessimistic alarmists ready and willing to cry it down, regardless of the many virtues which it may possess. This "bone" (if I may here use the term) appeared to have an inexhaustible supply of nourishment for some, if one may judge by the continuous gnawing which it is receiving through, and by some of our leading stock journals. These journals, which claim to always have the best interests of the stock-owner at heart, but which, nevertheless, decry the endeavors of a conscientious body of workers to eliminate from the herds the worst scourge with which human and bovine are afflicted.

Is there any substantial basis upon which the herd-owner can place his side of the controversy? Some have said many bitter things regarding the use of tuberculin, placing at its door many things, which, viewed from an unprejudiced standpoint, could not in any way be substantiated. The proper and only standpoint from which to view the tuberculin testing of cattle, is to give to it all credit which a careful test will always merit. It is an absolute necessity that the truth or falsity of these assertions be established in order that the wheels of progress, in this line of work, may move without hindrance. The recent defense of this work, so energetically carried on by Dr. Salmon, is to be admired by all who are in favor of the inspectors' side of the argument.

The veterinarian has received his full share of condemnation; and is this condemnation in all cases wholly unwarranted? I regret to say that it is not, but is warranted in many more instances than one hardly dare believe.

I dare say that it is no uncommon thing with other inspec-

tors as with the writer, to be told of some veterinarian (self-styled, or otherwise) going about testing herds by many different methods, some of which are veritable revelations. One must blush with shame at the many unscrupulous methods practiced by some, with no other purpose in view but to increase their earnings. Nor do I have to confine myself in my assertions to the self-styled veterinarians, but can remain within the ranks of the graduate. I do not hesitate to say that tuberculin tests (?) are made by those who have never seen a drop of tuberculin. It is no uncommon thing to hear of herds having been tested (?) by one visit of the veterinarian, by looking over the herd (or fence) and passing judgment, or taking the pulse and respirations and possibly the temperature, and pronouncing them tuberculous or not tuberculous. Not long since I was told by a reputable dairyman of one of the leading dairy districts in the State of Ohio, of the test (?) of his herd by the municipal dairy inspector—a graduate of one of our very reputable veterinary colleges, a man who, no doubt, was placed in that position by virtue of his professional calling. He visited the dairy, recorded the pulse and respirations on the side of the barn in the rear of each animal, drenched them with tuberculin (?) and in a few hours the pulse and temperatures were again recorded and judgment passed upon the herd. The dairy inspector was given the tuberculous (?) cows (two in number) as he wished them for experimental purposes. Several weeks after, it was learned that he had sold them to another dairyman. Of course, after such a profitable experiment, the cows were allowed to be milked by their new owner and the milk sold as before. This dairyman really believed that his herd had received a thorough tuberculin test until I informed him to the contrary.

Again, cattle are tested and pronounced non-tuberculous and upon being shipped to neighboring states, or another country, are retained at quarantine, or being tested and pronounced tuberculous arrive at quarantine and pass into a state or country which strictly forbids the entrance within its boundary of tuberculous animals.

I read with much interest in the *Veterinarian* an article by Prof. Duncan McEachran, of McGill University, Canada, in which he relates the polluted condition of affairs once in vogue, regarding tuberculous cattle in the live stock industry between Europe, Canada and the United States. Is it to be wondered at that the tuberculin test is condemned? Does this not give the dealers in cattle ample opportunity for the denunciations which they have uttered? Can we expect to make any progress with such unscrupulous pretenders within our midst? This "scull-duggery" must be acknowledged and is to be deplored. The tuberculin test rightly carried out in every particular is beyond just condemnation.

The test cannot receive the credit which its merit justify by any of the above-mentioned *modus operandi*, neither by the taking of two, three or four temperatures during the entire test. The right way is the only way, and by the right way I mean not less than five or six temperatures before injection and seven or eight temperatures, or more if necessity demands, after injection, and the confining of all animals under proper conditions and close observation of all which might act as a disturbing element during the entire test.

A proper test can be relied upon to give proper results. The herd-owner in some instances has some base upon which to place his shaky opinion of the tuberculin test, because he has been imposed upon; while on the other hand, I acknowledge my belief that many attacks are made upon it by unscrupulous persons having no other object in view but malicious destruction of the conscientious work of others and the furtherance of their own selfish motives.

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ONTARIO VETERINARY COLLEGE GRADUATES.—At the recent Christmas examinations the following were granted diplomas: Wilson A. Bisbee, Cleveland, Ohio; Alexander Doherty, Ellesmere, Ont.; J. Leonard Faragher, Lorain, Ohio; Albert T. Ford, Neustadt, Ont.; A. P. Lubach, Boonton, N. J.; John L. McCoy, Sussex, N. J.; William D. McMullen, Chilton, Wisconsin; Arthur E. Melhuish, Toronto; T. C. Neff, Jun., Long Glade, Va.; R. J. Norton, Owen Sound; J. A. Royce, Lincoln, Neb.

# NOTES ON A NEW DISEASE OF HORSES.

By John G. Slee, D. V. S., Assistant Veterinarian, Board of Health, Manila, P. I.

During the past season a disease of a febrile type has been noted by the veterinarians affecting the foreign and native horses.

The history was at first very obscure, the disease usually being far advanced when first seen, the death rate large, and treatment unsatisfactory.

The resident veterinarians and horse owners had noted the same conditions in former years, which they described as "Calentura," or fever, but did not think it had been so widely spread or the mortality so large as during the present season. Dr. H. H. Muecke, veterinarian of the Land Transportation Corral, says he had not noted it during the past two seasons, but was able to give much information concerning the disease, as it appeared this season in the government horses.

That the disease was widespread was evident by the reports to the Board of Health, which upon investigation showed it to be generally present in the Island of Luzon, and in one place all the native horses had died, while of the government stock about one-half were affected.

The first cases in native horses came under notice about the first part of June and presented swellings of the sheath, legs, and pads under the belly, in many respects similar to those of purpura, the membranes colorless, hæmorrhagic spots on the membrana nictitans, but no petechial spots on the schneiderian membrane, as in purpura; these were not seen in the foreign horses. There was always a temperature, very irregular—from normal at times to 105. In the native horse the disease would not run a very long course, anorexia appearing in the final stages, followed by death.

When the horses in the corrals became affected, the symptoms could be more easily noted, this being simply due to the fact that the native never notices that an animal is sick until it

is past recovery. I have seen horses being used with a well advanced case.

In the corral, the sick animal at first showed a temperature of from 103 to 107, pulse full, breathing increased and abdominal, appetite variable, from poor to good, but never entirely lost, the membranes slightly injected, but no hæmorrhagic spots, as noted in the native animal. The swellings of the belly, sheath and legs soon appear, in some cases may not be present, emaciation taking the place, but in the native horses, it seems to be always a marked symptom. At this point the temperature is variable, of an intermittent character, and is not controlled by any of the febrifuges; may be higher immediately after giving medication than before. Some of the cases last for a long time, being in the hospital for two or three months, ending in recovery or death. If the swellings suddenly disappear, death soon follows in the native horse, but this is also a symptom of recovery in the foreign horse.

As the disease progresses towards a fatal termination, the animal grows very weak, particularly in the hind legs, weaves from side to side when walking, may go down and be unable to rise.

The fæces are of a normal character, no marked constipation nor diarrhœa being present; the urine seems to be increased in quantity, but as to color or changes have been unable to note.

*Post-mortem.*—No special lesions are found, the organs and tissues showing an anæmic condition; in some cases abcesses were noted in the stomach and abdominal cavity. The pericardial sack and pleural cavity are always full of a serous fluid, but no appearances of inflammatory changes; ante-mortem clots are found in the heart.

As there were so many cases, it was supposed to be of a contagious type, but this did not seem possible, as in a stable of several horses, one would be affected and the others remain healthy, the horses standing side by side and eating out of the same manger.

The character of the disease being so much like malarial fever, the infection was looked for from some other source, and a parasite in the blood was suspected. Upon examination of the blood of a well-marked case, an animal parasite was discovered, which also was found in all the cases examined. In the new cases the parasite was seen, and as the case progressed they increased in number, but towards recovery grew less, and finally disappeared.

The parasite is an animal organism, a spirillum, rather blunt at one end with a flagellum at the other. In advancing, the tail seemed to advance, becomes entangled with the corpuscles, and he drags himself forward; he can go backwards, but the most of his movements are with the tail, advancing. They are of different sizes, the smaller seemingly a male, the larger a female; they often come together, the blunt ends being attached, and the flagellum moving very rapidly.

That they have some action on the red blood corpuscle is very evident, as the blood count is diminished, and the leucocytes increased.

Where the parasite comes from, his life history, will probably necessitate examination of the fly and mosquito. The disease is so widespread and the affected animals are fed and watered in many ways, the Filipino depending upon grass and rice, while the government stock have hay and oats, would in a measure exclude feeding as a source of infection.

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To Stop Docking in the District of Columbia.—Senator Gallinger, of New Hampshire, taking his cue from President Roosevelt, introduced a bill to prevent the docking of horses' tails on December 9. If his measure becomes a law, all owners of docked horses in the District of Columbia must register their animals within ninety days of the passage of the act. It shall be unlawful to bring a docked horse into the District of Columbia after the measure becomes a law, and all persons owning or driving unregistered docked horses shall be deemed guilty of a misdemeanor, and shall be liable for a fine of from $100 to $500, or a term of imprisonment of from one month to three months, or both.

# REPORTS OF CASES.

*"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of pathological science."*

## A CASE OF THROMBOSIS OF THE PULMONARY ARTERY.

By E. L. QUITMAN, M. D. C., Chicago, Ill.

During the evening of September 27th, 1901, I was called to the stable of one of my clients to see a mare about nine years old, weighing in the neighborhood of 1100 pounds, which was thought to have been "foundered."

The history of the case was that the mare had been idle for about four weeks, but had been at work for the past four or five days. Previous to this time she had never been sick or ailing during the time of her present ownership, which was over three years, her idleness being due to the owner having no use for her.

She was noticed to be stiff in the morning, but I was not called until evening. On coming into the stable the attendants were found trying to move her, and my first impression, gained from her attitude and apparent disinclination to move, was that I had a case of laminitis, myositis, or muscular rheumatism, to deal with. But upon examining the pulse, which was my first step in the examination, I saw that I had something "unique" instead, and immediately put on my thinking cap. I found a pulse which was at least one-half inch in diameter, extremely resistant and beating like a trip-hammer. This in an exaggerated sense also suggested lymphangitis. The accompanying vein was also immensely distended, but more compressible.

I next examined all superficial blood-vessels and found all *extremely* distended and firm. Especially noticeable were the larger blood-vessels on the inner aspect of the limbs, both hind and fore, which seemed, at least, an inch in diameter. The mucous membranes were slightly injected, respiration rapid, about 50 to 60 per minute. Occasionally there would be muscular contraction of the trunk, as though affected with "shooting pains," lasting but a moment.

Surface temperature was apparently normal, or higher than normal, temperature per rectum 104½° F. The limbs were warm and lung sounds normal. There was apparently an *inability* for motion, but upon forcing the animal this proved to be a *disinclination* rather than an inability. On first attempt the mare would settle back on her hind quarters as if badly foundered, then getting started would act as though the front

limbs were cramped (or "asleep") and after getting headway, always under force, would walk fairly well. Her countenance showed no signs of pain nor distress except for a moment, when the "shooting pains" occurred. The bowels were normal and the appetite excessive rather than lessened.

After carefully weighing all facts and excluding apparent ailments, particularly rheumatism, for want of completing symptoms, I made a diagnosis of thrombosis of some large internal vessel, even mentioning the pulmonary artery as the probable seat, on account of the increased respirations. I felt reasonably sure that it was not in the femoral or axillary arteries (which are the most common seats) onaccount of all four limbs showing trouble, with possibly more marked manifestation of the ailment anteriorly, but there was no coldness, and the symptoms did not abate after rest. The quickened and increased respirations suggested the pulmonary artery, or at least the anterior aorta, though this would occur (but to a less extent) in thrombosis of the posterior aorta.

Prognosis was unfavorable. I put the animal under treatment, consisting mainly of iodide of potash and carbonate of ammonia, alternated. The temperature varied from 103° to 105° during the progress of the ailment. No organic or inflammatory disease was manifested until the last four or five days of the animal's existence. Then gangrene of the lungs made its appearance without any preliminary symptoms of pneumonia. The animal never coughed, even after the 26th or 27th day, when I detected a most fœtid odor of her breath. I then depressed her head, which would cause a profuse flow of a very fœtid sero-purulent, slightly bloody fluid from her nostrils. I then informed the attendant that gangrene of the lungs had set in, and that her end was not far off. Emaciation progressed from the start, though she ate full rations, even finishing a full feed of oats the evening preceding her death, which occurred during the night of October 20th, 1901, 23 days after the commencement of her ailment.

I should add that on about the tenth day she showed an improvement to such an extent that it seemed that her recovery was assured, but after a couple of days of this apparent improvement, she relapsed into her former condition without material change until the pulmonary gangrene set in.

*Post-mortem.*—I have never before seen so many pathological conditions in one animal. It was simply remarkable that the mare lived so long. In the abdominal cavity there was

found some effusion, patchy peritonitis, bowels congested, kidneys enlarged, stomach congested, spleen empty, flat and flabby and beautifully mottled with hæmorrhagic infarcts. The ovaries were normal. The liver had an old cicatrix on it about one and a half by one inch in size, and a number of small elevations of Glisson's capsule, as if gas had forced it out into minute elongated pouches.

Upon opening the thoracic cavity a considerable amount of very fœtid gas escaped. There was also some serous effusion here, patchy pleurisy and a pericarditis. The heart was enlarged and contained antemortem but recent clots. The lungs were *filled* and distended with a very foul sero-sanguinous fluid, which ran out when the lungs were cut and could be squeezed out like water from a sponge. There were large and innumerable areas of gangrene, and were emphysematous.

Upon opening the pulmonary artery I came upon my object of search. There we found a thrombus of a yellowish or grayish-white color, which I caught hold of and gently pulled upon, and was rewarded by drawing out a clot which showed the distribution of the blood vessels most beautifully and minutely. I spread this out nicely on white paper and the clot shows the main trunk which represented the pulmonary artery and the right and left branches into both lungs and further subdivisions until it became as fine as the finest hair.

It seemed almost impossible that a clot could get so tough as to have strength enough to allow it to be drawn out of the most minute blood-vessels. This toughness proves its age and in my opinion leaves no doubt as to the diagnosis made on my first visit.

In conclusion, I will say that I based my diagnosis almost entirely on the very great distension of the blood-vessels, together with a lack of completing symptoms of other apparent ailments, or, in other words, I diagnosed "by exclusion." I figured that nothing short of a mechanical obstruction could cause such a condition of the blood-vessels and pulse; along side of which a typical laminitis pulse, which I believe is our largest pulse, becomes a small wiry pulse in comparison.

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## REMOVAL OF A CALLOSITY.

By J. A. McCRANK, D. V. S., Plattsburgh, N. Y.

A few years ago Dr. W. purchased a driving mare. She was gentle, easily handled, perfect in every respect, barring a callous cicatrix on the front of the ankle on one hind foot,

caused by the calk of her shoe. The mark was elliptical, about three inches long, three-eighths of an inch wide at the widest part, and about one-fourth of an inch thick. He wished very much to have it removed, but I discouraged him, because my experience in such operations was not at all satisfactory; but he was persistent. He being of a mechanical turn of mind soon caused me to volunteer to operate; so we adopted the following method (new to me, but possibly not to more experienced professional brothers):

The hair was shaven back from the edges of the cicatrix about three inches, two pads of cotton felt were made, about one-fourth of an inch thick, placed parallel with the wound. These were thinned back to an edge, and glued to the shaved dry skin. To the sloping sides of the pads were glued a strip of leather with holes punched for the easy passage of a needle. This took about two hours of patient work. Now the cicatrix was dissected from the edges of the hair, blood prevented from flowing by the use of a solution of the sulphate of copper. Iodoform was next dusted over the wound, and with a shoemaker's waxed thread the edges of the wound were drawn together by drawing the two pads together. A strong bandage was used and the beast turned into a box. On the ninth day we examined the wound to find it clean and healed by first intention. It was bandaged again for fifteen days, when every sign of a cicatrix was gone. The bandages were readjusted and removed after twelve days, when the pads were taken off by means of warm water, etc. The cure was perfect.

I make this report because I never saw such an operation recorded, and some of the REVIEW readers might benefit by our work. I do not claim any credit for the ingenuity used. It was Dr. W.'s mechanical genius.

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## TWO CASES OF TETANUS SUCCESSFULLY TREATED WITH ANTITETANIC SERUM.

By Dr. D. W. MACK, Appleton, Wis.

I recently treated two cases of tetanus with antitetanic serum (Parke, Davis & Co.), with results that convince me of its specific value in this once fatal disease.

*Case I.*—A farmer drove a gray gelding up to my office on July 22, 1901, and said his horse was acting very peculiarly. He wished me to examine the animal, which I did, when I was at once able to make a diagnosis of tetanus. I considered the disease to be idiopathic, inasmuch as I could find no point of

infection, as a puncture of the foot or wound of any description. The horse was placed in a large box-stall away from the street, when on removing the bridle I found it difficult to extract the bit. The muscles of the head and neck were very rigid and the pulse-rate was 55. I immediately administered hypodermatically one ounce of Parke, Davis & Co.'s antitetanic serum. The next day, July 23, the area of muscular rigidity had extended backward over the whole body; the teeth were firmly set and the pulse-rate had risen to 60. The dose of one ounce of antitetanic serum was repeated.

On the 24th I found my patient unable to drink. There was rigidity of the whole muscular system, elevation of the tail; the membrana nictitans would pass over the eye very quickly upon the least noise or excitement; the pulse-rate was 68. I administered another dose of antitetanic serum. July 25 I found the patient worse: there was a profuse salivary discharge from the mouth, and he was drawn up in the flanks; pulse-rate 72. On this date I gave a dose of antitetanic serum morning and evening. This condition continued, with elevation of the pulse-rate to 85, until July 29. Each day I gave the horse two doses of antitetanic serum. Upon the 29th I found the patient better; he was not so nervous as he had formerly been. There was a slight grating of the teeth, and the pulse was 78. I gave him a dose of antitetanic serum. July 30 I found the patient improving, although there was a continual grating of the teeth; the pulse-rate was 70. Again I administered a dose of antitetanic serum. July 31 the patient was able to drink a little thin gruel and seemed very hungry. Upon this date I gave him the last dose of antitetanic sernm. He continued to improve, and on August 8 I discharged him from the hospital cured.

*Case II.*—On August 19 I was called to attend a horse that had received a puncture-wound of the foot upon a nail. I pared the hoof out thoroughly, treated the wound antiseptically, and in four days the horse was working. Ten days later I was again called to see the animal, when the owner said that something was wrong with his eyes. The membrana nictitans passed over the eyes quickly upon the least excitement, although the horse was able to eat naturally. The pulse-rate was 45 a minute. I diagnosed the case as one of traumatic tetanus, treated the wound in the foot, and gave a dose of antitetanic serum. The next day the patient was worse, although still able to eat. The wound in the foot appeared to be doing nicely; the pulse-rate was 52. The second dose of serum was administered. August 31 the

patient's teeth were set; he was very excitable; naturally he is a very nervous horse. The masseter muscles were rigid; pulse-rate 65. I administered a dose of antitetanic serum. September 1 I found my patient worse. There was complete rigidity of the whole muscular system and the tail was elevated. There was also a profuse secretion of saliva which was discharged from the mouth. The pulse-rate was 74. I gave the animal a dose of antitetanic serum both in the morning and evening. From September 2 to September 8 he grew gradually worse, and was terribly drawn in the flanks. He would rest heavily with the back parts against the stall, until it became necessary to use a pad to keep him from injuring himself. The pulse rate gradually rose to 110. The treatment consisted in the continued daily administration of two doses of antitetanic serum. September 28 I found the patient was not quite so nervous, but still grating the teeth a little; his pulse was 100. I gave the usual doses of antitetanic serum. The animal continued to improve, although the severe grating of the teeth did not cease; the pulse-rate became lower, until on September 14 I deemed it prudent to stop using the antitetanic serum and discharged the horse as cured, but the most emaciated patient I ever attended. I would say that this horse had been kept in an underground barn, in a box-stall under a driveway over which hacks, 'busses, express wagons, etc., were going in and out of the barn. This made the conditious much worse, as the noise kept the horse excited and nervous most of the time he was under treatment.

In conclusion, I would state that during sixteen years' experience in practice, if I was able to save 4 per cent. of horses suffering from this diseaee I considered I was doing well. Now, however, with antitetanic serum as a weapon, I think I can cure 95 per cent. at any rate. Therefore I heartily recommend to my fellow-practitioners the use of Parke, Davis & Co.'s antitetanic serum in all cases of tetanus.

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## HAIR-BALLS IN CALF'S STOMACH—HOW DID THEY GET THERE?

By E. W. Brumter, V. S., Alliance, Ohio.

A short time ago Mr. Lilly (a farmer) sold a calf to the butcher, which was killed and delivered the next day. The contents of the abdominal cavity were thrown out for the chickens. About a week after the calf was killed Mr. Lilly in passing the place where the intestines were thrown noticed what he took to be balls of hair, and wondering where the balls of hair came from started an investigation, and decided they came

from the calf's stomach. He cut one in two and found it contained nothing but hair, the hair being the same color as the calf's; the balls were all very compact. Having never heard of anything of the kind before, he brought the balls he had found and what was left of the stomach (the chickens having picked it considerably) to me. I examined what was left of the stomach and found quite a number of balls, there being fourteen in all, ranging in size from a large walnut to one 8 inches in circumference. The calf was one day short of four weeks old when killed, of Durham breed, and dressed 115 lbs. Mr. Lilly said the calf was apparently in perfect health, and was as fine a calf as he ever raised. There were no other cattle near it; the calf was kept tied and left to the mother morning and evening just long enough to suck.

Taking the age of the calf, the number of balls (14), and the fact that it was near no other cattle into consideration, the question is, how did they get there? My opinion is that they were congenital. If not congenital, how did they get there? I would be pleased to hear the opinion of any members of the profession on this case. I think I am safe in saying that this calf had more hair on the inside than it had on the outside.

## RABIES AND THE DIFFERENCE IN PERIODS OF INCUBATION.

By E. W. BRUMTER, V. S., Alliance, Ohio.

January 16, 1900, a dog, which afterwards proved to be rabid, entered the stable of Mr. S. Three boys, who were in the stable at the time, began to play with him, but the dog did not seem inclined to play, and either bit or scratched one of the boys on the cheek; the skin was broken, but the boy being scared could not tell whether the dog bit or scratched him. The boys, after seeing the dog snap at several cows, endeavored to drive him out of the barn with forks, but did not succeed in doing so until the dog had gone the full length of both horse and cow stable. Nothing was thought of the matter until rabies showed in cow No. 1, February 26th. The different cases showed up as follows:

Cow No. 1, February 26, 1900.
Cow No. 2, February 27, 1900.
Cow No. 3, *March 1, 1901.*
Horse No. 1 (driving mare), March 16, 1900.
Horse No. 2 (draft gelding), March 19, 1900.
Horse No. 3 (draft gelding), May, 14, 1900.

The first and last cases were let run their courses, which

resulted in death in a few days. The others were killed to end their sufferings.

Cow No. 3, you will notice, showed nearly 14 months after cow No. 1. Cow No. 3 had a better developed case than either Nos. 1 or 2. The horses all had well developed cases. The boy was sent to Chicago and received the Pasteur treatment.

## CASTRATION OF A COLT WITH A SCROTAL HERNIA.

By WILHELM SCHUMACHER, M. D. V., Stevens' Point, Wis.

The subject, a yearling colt, presented a unilateral hernia about the size of an infant's head, which had been noticed since birth. The colt had been treated by the local blacksmith, who had made a truss of leather and iron, which did not fit well and caused swelling, abrasions, and would not stay on. A quack, pretending to be the State veterinarian, applied some rattlesnake oil (for which he charged $2 per ounce), apparently a blister, without success. The owner after this experience was willing to submit the animal to a radical treatment; so the colt was cast, rolled on its back into a hole and banked with earth so that the hind part was elevated about a foot. The scrotum and neighborhood was then washed with a hot 10 per cent. solution of lye, then with water, and finally with wood alcohol. After dividing the skin it was found that the tunic adhered to the skin and had to be dissected away for about six inches. The external ring proved to be wide enough so the hand could pass in, allowing an easy reduction of the hernia. Passing a string around the sac and testicle it was drawn up as far as possible, and a clamp 10 cm. long applied as high as it could be placed, but before closing the clamp the sac was turned once around its axis. The clamp and its groove had been painted with biniodide of mercury in gum arabic, and then dried. A pair of open extracters serving as clamp forceps. The whole wound was then rinsed with a 1:500 bichloride solution, tamponed with oakum soaked in the same solution. The external wound, about 7 inches long, closed with two stitches and the animal allowed to get up. The stitches and tampon were taken out after three days and the scrotum ordered to be washed once daily with a hot creolin solution until the clamp would fall off, instructing the attendant to pull gently on the string hanging from the clamp. Three weeks later the owner sent word that the wound had almost healed up, but that the clamp had not come off.

On arrival I found the colt in fine condition, and the clamp could be felt through the skin. The skin was thoroughly

divided on the standing animal and the clamp removed. It had grown in so tightly that it proved quite a task to get it loose. The wound was cleansed thoroughly and healed within two weeks.

This operation brought two more and both were successful. On the second one the clamp was taken off after six days, but with considerable hæmorrhage, necessitating tamponing and stitching and followed with extensive swelling.

The third case was treated like the first; the clamp came off after 17 days, when the owner pulled the tie string with some force.

# DEPARTMENT OF SURGERY.

By L. A. and E. Merillat,

*Chicago Veterinary College, 2537-39 State Street, Chicago, Ill.*

## SURGERY OF THE EYE, EAR AND UPPER AIR PASSAGES.

(*Continued.*)

Evisceration or Exenteration.—This operation has its indications and contra-indications. There are numerous cases that will do better by enucleation than by evisceration, especially when there is danger of sympathetic ophthalmitis. Nevertheless there are cases in which the importance of the operation should not be overlooked. The appearance of an animal can be greatly improved by the introduction of an artificial eye (*prothesis oculi*). Although this is not a common procedure in veterinary practice, it is one which may at times be of some value to owners of favorite and valuable animals. The indications for evisceration are

1. Staphyloma.
2. Suppurating corneitis.
3. Suppurating choroiditis.
4. Accidental wounds.
5. Opacity of cornea.
6. Injuries from heat or chemicals.

1. *Staphyloma.*—All cases of staphylomata which are complicated by conditions that will favor infection and extension of inflammation to the meninges or to the other eye, must be considered contraindications for the operation; but, such staphylomata as are generally observed in the lower animals, and which cannot be successfully treated by other surgical intervention without destroying the eyeball, may be considered favorable cases for evisceration. However, if there is danger of infection,

it is necessary to resort to all possible means to determine the nature of the condition and the danger of metastasis.

2. *Suppurative Corneitis.*—Any condition of the cornea which will not yield to treatment and which is surrounded by a state of things that will engender sepsis, may require a removal of the eyeball or evisceration. Perforations of the cornea whether due to trauma or disease are most invariably followed by loss of sight; and in many instances leave an unsightly eyeball, unless treated by proper surgical means. If the septic portion of the eyeball can be removed without resecting too much of the eyeball, evisceration is the proper operation to adopt; but, if too much of the globe is involved, it is safer to remove it. Such surgical interference must never be undertaken unless all palliative measures have failed.

3. *Suppurative Choroiditis.*—All the conditions in suppurative corneitis, such as extension of inflammation to the other eye, the meninx, or meninges, are contraindications for evisceration in choroiditis. In general, choroiditis is a more serious condition than a corneitis of the same pathological nature; that is, a septic choroid coat is more dangerous than a septic cornea, when evisceration is the operation in question.

4. *Accidental Wounds.*—Accidental wounds to the eyeball are always more or less serions. Slight wounds that simply perforate the cornea and open the auterior and posterior chambers are often followed by grave conditions. The complications in such instances are generally due to the infection of the eye by the object which inflicted the wound. These wounds may not injure any part of the inner structures of the eye and yet terminate very unfavorably. If the eye is treated from the time of the injury, it is necessary to learn the nature of the object which produced the wound, and if there is any danger of infection, it must be controlled from the beginning; but, if the infection cannot be prevented or the septic process arrested, it is a wise plan to eviscerate before the eyeball has become too badly involved.

Wounds that penetrate the eyeball are always more serious than those above mentioned. The danger of infection is greater; and, the damage may be so great that it is impossible to repair the injury done to the structures within the ball. In wounds of this nature, evisceration should be the surgical treatment selected before septiç infection has made any progress.

Rupture of the eyeball may also be an indication for the operation, especially if accompanied by prolapse of the iris and

lens. All ruptures however, are not indications; some can be treated and the sight restored, while others cannot. Ruptures without dislocation or prolapse of iris or lens are sometimes treated by palliative methods with good results; but, when the iris is ruptured, the lens dislocated and the contents of the ball expelled, evisceration is the proper treatment.

5. *Opacity of Cornea.*—Opacities of the cornea are usually due to an inflammatory process which fills the interstitial spaces with a product that becomes organized; the effusion may become connective tissue which is not transparent, and which is not absorbed by the lymphatics of the cornea. The most favorable cases of opacity generally leave streaks in the cornea. There are various intensities of opacity; the lighter forms are known as *nebulæ*, and the denser forms as *cukomata*. When the cornea is only slightly disfigured, the appearance can be improved by tattooing with India ink; but when the entire cornea is discolored, the contents of the ball may be removed and an artificial eye inserted. The only advantages gained by evisceration is in the reduction of the size of the eyeball, which facilitates the adjusting of a shell in prothesis. In opacity of the cornea, there is but little gained by prothesis; in fact, we can see no advantages over tattooing, even when the entire cornea must be tattooed. By tattooing the cornea, the danger of septic infestion is much less than in enucleation or evisceration; aud it must therefore be of more value to the veterinary practitioner than either in removing the unsightly appearance of opacity of the cornea.

6. *Injuries from Heat or Chemicals.*—Injuries of this nature have already been mentioned in a previous number of the REVIEW under "Enucleation."

When injuries of this kind destroy the coats of the eyeball, the injured part is exposed to infection and in such instances the eyeball should be eviscerated; or, if the wound has been neglected and badly infected, it should be enucleated.

*Operation.*—The operation must never be undertaken if there is any danger of sympathetic ophthalmitis. When the other eye is already affected or shows disturbance due to metastasis, the procedure must be deferred until the patient can be properly prepared for the ordeal.

*Instruments.*—The instruments required are needles, sutures, speculum, forceps, small, knife, scissors and curette.

*Technique.*—The conjunctiva is dissected from the cornea from the equatorial region of the cornea in both directions.

The cornea is excised with a knife and scissors; the contents of the eyeball are evacuated, and the inner coats curetted. The hæmorrhage is controlled by mild astringents and hot water; the cavity is cleaned with a 1:3000 or 4000 bichloride solution; the edges of the sclerotic coat are sutured with catgut suture, and the conjunctiva is sutured with silk.

*After-treatment.*—The patient should be kept in a clean quiet place; the wound should be bathed with hot water for at least twenty-four hours; and dressed every day for the next four or five days.

*Mule's Operation.*—This is a modification of the operation just described. After the ball has been eviscerated, a sterilized glass ball is inserted into the cavity, and held in place by suturing the sclera and conjunctiva. The after-treatment is the same as in evisceration.

*Complications.*—The operation is often followed by undesirable and alarming conditions; such as œdema of the conjunctiva (*chemosis*); œdema of the eyelids (*blepharedema*); inflammation of the eyelids (*blepharitis*); and, in neglected cases, the eyelids are sometimes enlarged (*blepharoncus*), or abnormally closed (*blepharocleisis*). The operator that can successfully pilot such an operation to a favorable termination, demonstrates to his client and his profession, that he understands *introtechnics.*

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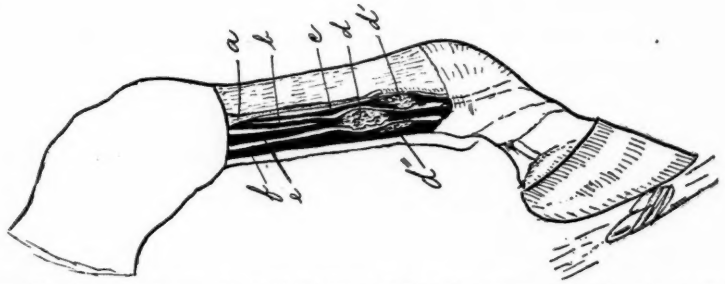
## SURGICAL ITEMS.

NOTE.—We owe Dr. Richard, of the post graduate class of the Chicago Veterinary College, an apology, for omitting his name after the article entitled "Sclerotomy," which appeared in the "Surgical Department" of the December number of the REVIEW. We are always very glad to receive articles from professional men who are willing to devote part of their spare moments in the preparation of something relating to veterinary surgery.—(*E. M.*)

*Ossification of the Tendons* (?).—During the December dissections at the Chicago Veterinary College, one of the subjects was quite old (abont 18 years) and it had been very lame in both front and one hind leg. When the legs were dissected, bony deposits were found in the white fibrous structures of both front and right hind leg. The accompanying cut illustrates the location of the bony or calcareous deposits. This is the second subject with osseous deposits in the tendons and ligaments of the leg that we have found in the dissecting rooms;

the first subject came to our notice last winter during the dissecting session. Have inquired of old practitioners whether this is a common condition or not; and have learned that the veterinary profession knows but little of the condition. The medical profession, however, is more familiar with the condition, and usually refer to it as an ossification of the tendons. For the benefit of the profession we would ask demonstrators of anatomy of veterinary colleges, to report (1) the number of similar cases that have come to their notice. (2) To ascertain whether the condition is osteogenic or calcareous.—(*E. M.*)



*A*, small metacarpal bone; *B*, check ligament (inferior); *C*, suspensory ligament; *D D' D''*, osseous deposits in tendons and ligament; *E*, perforans tendon: *F*, tendon of perforatus.

*The Hands in Surgery.*—The danger of infecting wounds with the hands and the importance of rendering them harmless during surgical operations has received much attention among human surgeons during the past few years. In the earlier days of antiseptic surgery the surgeon's hands were considered safe when they had been scrubbed with soap and water and freely immersed in a potent antiseptic solution. Recent research, however, has proven beyond question that the hands, no matter how energetically scrubbed, nor how freely bathed in antiseptics persistently, harbor organisms sufficiently numerous and virulent to defeat the surgeon's purpose in many instances. Scrubbing the hands is now regarded as detrimental in that it brings more organisms to the surface, and hot water washing is said to open the pores and induce a perspiration with the same results. A scrupulous surgeon will now frequently postpone a capital operation for days after having polluted the hands with septic matter of a highly virulent character, recognizing the difficulty of disinfecting them safely, and no honest surgeon will now attend a case of parturition after having manipulated a

patient suffering from erysipelas, nor would a careful surgeon undertake a laparotomy immediately after having polluted his hands with the putrid discharges of a wound. The veterinarian must sooner or later recognize this feature of clean surgery. To cope with a putrid after-birth in the morning and then castrate a cryptorchid before the day is over must eventually be recognized as inconsistent and dangerous. That the hands of the busy veterinarian are seldom clean enough to perform operations in the internal cavities can hardly be denied in the face of recent investigations regarding the flora of the skin. The human skin is particularly well constituted to harbor organisms which will defy removal, and as the veterinarian's hands are continually brought in contact with septic matter this subject deserves the most carefui attention. Some of our best veterinarians are particularly unfortunate with their castrations, while a non-professional castrator in the same community seldom has a casualty. Is it not possible that the hands are the cause? Have we not frequently observed that a number of castrations performed on a single day have all been followed by an unaccountable amount of swelling and perhaps one or two fatalities, while on other days every case progressed favorably? Might not the contaminated hands be the cause? Few veterinarians have skilled assistants to execute the preparatory steps of their operations, and hence must secure the patient, clip, shave and wash the seat of operation. The casting harness of a veterinarian is continually being soaked with pus and blood, and as they must be handled by the operator he finds, at the very outset of the operation, his hands in a condition that would make the human surgeon shrink from operations for a week, and as this circumstance cannot be obviated it remains for us to adopt methods that will render the hands less harmful, viz.: (1) *Avoid digital manipulations of surgical wounds.*—It is indeed seldom necessary to *paw* over our surgical wounds. Metallic instruments that have been sterilized should be used instead of the fingers, whenever possible. It is evident that this one precaution will accomplish more in the prevention of wound infection during operations than any other, and henceforth, the technique of our capital operations must be arranged with this end in view. (2) *The use of gloves.*—Gloves are useful in many veterinary operations in protecting the patient against infection as well as the surgeon himself. Gloves, even the light rubber variety, are somewhat cumbersome and in a measure impede delicate manipulations, yet, in certain septic

operations, the veterinarian is justified in wearing them, as they will serve to keep the hands pure for other operations in which asepsis is an indispensable feature. The chief use of gloves, however, is in casting and securing the patient and in preparing the operating field. If used for this purpose the subsequent steps can then be performed with normally clean hands which otberwise would have been dirtied beyond restoration. (3) *Avoid capital operations after having performed septic ones.*—Operations of the internal cavities, castrations, etc., must not be thought of immediately after having removed a putrid fœtus or operated upon a fistula or abscess with the bare hands. Such operations, unless performed with gloves, render the hands unsafe for operations during several days following. (4) *Disinfection of the hands.*—The hands of a surgeon must be free from long nails and finger rings and the arms should be bare to prevent the coat sleeve or cuff from interfering with the work and coming in contact with the wound. In cold weather rubber sleeves are useful and in fact indispensable. The first step in disinfecting the already clean hands is to wash them well in soap and tepid water and then immerse them freely in a solution of mercuric chlorid 1-500, repeating the latter frequently during the operation. Suitable solutions of lysol or carbolic acid also merit consideration in this connection.—(*L. A. M.*)

## EXTRACTS FROM EXCHANGES.

### GERMAN REVIEW.

By Adolph Eichhorn, D.V.S., Bureau of Animal Industry, Milwaukee, Wis.

The Entrance of the Tubercle Bacillus and its Localization in Man [*Prof. P. Grawitz*].—The new theory of R. Koch, regarding the non-transmissibility of bovine tuberculosis to the human race, excited surprise all over the civilized world, when it is considered the extensive hygienic measures, humane and sanitary regulations that are enforced. The few experiments performed on cattle and hogs will not suffice to overthrow all these existing conditions, and to shake the foundation of the adopted precautions. B. proved that chemicals free from bacteria, as nitrate of silver, turpentine, etc., have an entirely different action on the different kinds of ani-

mals; further, it is known that actinomyces in man produces suppuration, while in cattle tumors. He further states that the intestinal mucous membrane does not belong, by any means, to the prædilectic places for tubercle bacilli, as it often remains intact, when the mesenteric lymph glands are extensively affected, and also often, when through a number of years, the sputum containing the bacilli and expectorated from the lungs is swallowed. G. in his demonstrative courses, continually called attention to the great importance of the tonsils as entering place for the tubercle bacilli, and found that in tuberculosis the tonsils not only contain residues, but also fresh tubercles with giant cells, without noticing a change in them from their external appearance. From the tonsils the bacilli reach by the way of the lymph circulation, the cervical lymph glands, and from here they infect the lungs and even the pleura and pericardium. *Therefore a child may die from tuberculosis, without showing the slightest affections of the intestines, or the mesenteric lymph glands, and at the same time the food being the carrier of the infection.*—(*Deutsche Med. Wochenschr.*)

TAPEWORMS IN DOGS [*Schiei*].—To expel this worm is often accompanied with great difficulty. All the single anthelmintics for tapeworms have the disadvantage that before their administration the animals must be prepared by fasting, and they also must be followed by a cathartic. Therefore, preparatory, worm and after-treatment is required. A complicated treatment of this kind can be adopted in a hospital, but is very often impracticable for the busy practitioner. It is also well known that to obtain satisfactory results in most cases, one cannot depend on the clients for the administration of the anthelmintic and cathartic. The best anthelmintic doubtlessly is kamala, even in cases where the species of the parasite is unknown. But after the administration of kamala, in most cases, only a few segments of the worm will leave the animal, as generally dogs will not retain the medicine. The author has had considerable experience with dogs affected with tapeworms, and obtained remarkable results from the following prescription:

℞ Seminis arecæ, gm. 20.0
Kamala, gm. 10.0
Butyr. cacao. q. s. f. pilulæ No. xxv.
Obduce ceratino.

As soon as the presence of worms is established, or even if they are suspected, in all circumstances, whether fed before or not,

these pills are administered. Smaller dogs receive 10–15, while large dogs all the 25 pills in one dose. One hour after the administration the action begins, without causing the dog to vomit. *Two to three hours after, the dog expels the tapeworm with head and segments.* The author thinks the combination of the kamala with the semen arecæ brings about the remarkable effect, and to his knowledge this never was tried before. (One can have a smaller number of pills made from the same prescription, for more convenience in administration.)—(*Berl. Thierarzt. Wochenschr.*)

THE HÆMATOMES OF HORSES AND THEIR TREATMENT [*Hennig, Berlin*].—Hæmatomes in horses are by no means rare occurrences, notwithstanding the opinions of veterinary surgeons regarding their nature differ, as they are taken by some as hæmatomes, while by others as lymph extravasations. To enlighten this difference in opinions Hennig undertook very extensive experiments, of which the results can be concluded in the following: All the 75 examined blood cysts represented as a fact hæmatomes. The experiments further demonstrated, and principally the hæmatomes produced in an experimental way that their contents after long standing undergo such changes in its physical and chemical consistency that by this they are mistaken for lymph extravasates. Smaller hæmatomes terminate in resorbtion; middle sized may also be resorbed, but in this the resorbtion remains incomplete. Large hæmatomes are not resorbed; on the contrary, at their periphery there will a condensation of the connective tissue take place, by which the contents completely become incapsulated. Should the hæmatomes become infected with pus cocci, they may suppurate and form abscesses. A putrefactive decomposition of their contents is very rare, and then the cavity contains a fœtid, dirty fluid. Further terminations are their organization to connective tissue, calcifications aud ossifications. Their causes are: contusions resulting from beating, blows, falls, kicks or slips. In the last two cases they occur, very likely, from the violent contraction of the muscles and rupture of some deeper blood vessels, giving rise to the formation of the hæmatome. The prognosis is always favorable. In their treatment, first of all their opening is to be considered, which should not take place too soon, the proper time being from the fifth to the eighth day after their formation. As the blood tumors represent aseptic cysts, therefore irrigations should be avoided, by which they may become infected. All that is essential is to take care of the incised

wound by cleansing the same with an antiseptic fluid.—(*Monatschr. f. pr. Thierh.*)

## BELGIAN REVIEW.

By Prof. A. LIAUTARD, M. D., V. M.

TWO CASES OF LYMPHADEMIA IN COWS [*E. Lienaux*].—This affection is not rare in cattle. In the first animal there was first an enlargement of the prepectoral lymphatic glands, which being suspicious of abscedation, was punctured without result. Later on this tumefaction of the inferior border of the neck had reached the size of the head of a child. The jugulars were very large, and bulging under the skin. The prescapular tumors which had not been punctured were as large as the fist, ovoid, elastic in consistency. They make one think of secondary adenitis, of malignant tumor or primitive abscess. The enumeration of the white globules shows a marked lowering of the red corpuscles. There is an absence of leucæmia. The general condition is bad, although the functions act normally. After three weeks of observation the precrural glands become hypertrophied and form elastic tumors, vertically elongated and painless. They project on each flank. Tympanites, intermittent in character, soon makes its appearance; the animal loses flesh and dies. The post-mortem confirmed the diagnosis of lymphademia, which had been made by the hyperplasia of the glands above mentioned, as well as by that of the bronchial and mesenteric glands. The lungs were the seat of verminous bronchitis. *Case II.*—This was more interesting on account of the greatest number of lesions and the specific alterations of the skin. The formation of adenoid tissue in the skin has been observed in man; this case is probably the first recorded in veterinary medicine. With this subject lesions were very peculiar. It was a three-year-old cow, which had a singular aspect. She was bosselated, and at first sight seemed covered with warts. There were numerous tumors, spread more or less all over the body, except the lower end of the legs; they were on the head, the neck, the back, the croup, the tail, the perineum, and the mammæ, where they were in greater number. These tumors protruded under the skin more or less; there was no villous or papillar aspect, no fissures between as in warts; they were flat, with hairs more or less erected, sometimes they were hairless.

They were not pedunculated, but elastic without softness; they were not painful. Other tumors existed, formed by the superficial lymphatic glands, the parotidians, subglossals, retropharyngeal, prescapular, precrural, and supramammary. Rectal exploration revealed their presence in the sublumbar glands. Microscopic examination of one of the tumors revealed its nature—that of lymphadenoma. The post-mortem confirmed also the diagnosis. In both of the animals the spleen and Pyers' patches were free from hypertrophy.—(*Ann. de Bruxelles.*)

SYMMETRICAL AND ENIGMATICAL COLD ABSCESS IN A COW [*E. Lienaux*].—These two adjectives are applied because of the similar form and aspect of the swellings which occurred, and also because no cause for the development of the morbid process could be found. A young cow, without apparent sickness, one day had the outside of both thighs swollen. These slowly enlarged, and three months later they were perfectly symmetrical, beginning immediately above the stifles; greatest size about the superior region of the thigh, and gradually diminishing to the external border of the croup. From forward backward each swelling covers the horizontal surface of the thigh. It is uniformly rounded, the skin excessively stretched over it; the cellular tissue under it is normal and free from infiltration or induration. The consistency of the deep structures is irregular—here hard, and there with imperfect indication of fluctuation. Any movement is painless, no lameness, and perfect locomotion. What is the true nature of the trouble is difficult to make out. The animal is killed. At the autopsy three or four abscesses are found between the deep face of the superficial gluteus and facia lata and that of the triceps cruralis. Those abscesses form isolated pouches, about as big as a child's head, containing 10 litres of pus. Their walls are fibrous, not thick, smooth. The pus is white, thick, and under the microscope contains staphylococci. There is no change in the cellular tissue which unite the various abscesses.—(*Ann. de Bruxelles.*)

POST-MORTEM OF A TUBERCULOUS HORSE—SPECIFIC LESIONS OF THE MUSCLES AND SUBCUTANEOUS CELLULAR TISSUE [*M. Fally*].—The animal had been condemned for an incurable affection of the sheath, and killed for the butchery, when he was condemned as tuberculous and seized. The following is a brief account of the lesions: General appearance of the meat fair; numerous whitish granulations on the pleura, where they appear translucid. In passing the fingers alongside the ribs a great number of these granulations can be felt,

although they cannot be seen. The lungs were filled with miliary tubercles. The auricles were cretified. The lymphatic glands of the thorax and abdomen were full of tuberculous lesions. There were tubercles in the liver, in the spleen; nothing to the naked eye in the kidneys. Then, finally, tubercles as big as a millet-seed were in the subcutaneous connective tissue, specially in the regions of the chest, of the ribs, shoulders, and loins. The muscles underneath this diseased connective tissue were also tuberculous, especially the pectoral muscles. * * * The history of the foregoing subject previous to its being killed is interesting. Some time before he had been presented to Mr. Lienaux, who had found him with a large swelling of the sheath, producing a complete phymosis, which was supposed to be an indurated œdema of the sheath, which it was decided was to be operated upon by amputation. The animal had been castrated, having healed well and regular. By the operation—removal of the cylindrical part of the sheath—this organ had about resumed a regular aspect, and it was supposed that after healing the animal would be useful. At first everything seemed satisfactory, but after a while the tumor of the sheath returned larger than before, and as successful treatment was out of the question, the horse was killed, with the result above described. Now came the question, was this tumor of the sheath tuberculous? It seems not, as careful examination of the sheath showed that the animal had typical funiculitis on both sides (scirrhus cords), distinct from the cutaneous cicatrix by schlerous tissue; there were in them abscesses of all sizes, containing botryomyces, without tuberculous bacilli, says Mr. Lienaux. At any rate, it is interesting to note the presence of the funiculitis without fistula. The presence of the two different bacilli is, of course, purely accidental.—(*Ann. de Bruxelles.*)

FRACTURES OF THE VERTEBRAL COLUMN [*Prof. Hendrickx.*]—The author records four cases of fractures, which all presented this important peculiarity that, although the lesion was very serious, the animals were able to travel quite a long distance, and one of them worked for several days. *Case No. I.*—A horse, partly anæsthetized, is cast, secured, and fired along the tendon. He struggles severely towards the end of the operation. Released, he got up with some difficulty, moved stiff-with back somewhat arched. He walked away for fifteen min, utes, stumbled, and dropped to rise no more. At autopsy a fracture of the body of the second lumber is found. *Case No. II.*—A four-year-old is thrown and castrated without anything

abnormal apparent, except when up he shows stiffness behind. First, he was to be left at the place where he had been operated upon, but two hours later the owner called for and took him to his own barn. An hour later he was found down, and unable to get up. Post-mortem: Comminuted fracture of the body of the fourth lumbar. *Case No. III.*—A horse to be docked is placed in stocks. At the end of the operation he struggles desperately and throws himself violently on the front bar of the stocks. In backing out of the stocks, stiffness behind is noticed. He is placed in a box-stall sixty feet distant. Three-quarters of an hour later he is lying down and cannot get up. Post-mortem: Comminuted fracture of the body of the third lumbar. *Case No. IV.*—This eight-year-old heavy draft horse has never had an accident and never been ill. All at once he refuses food, has slight colic, and is laid up. He has all the appearances of an animal suffering with painful sickness. He paws, scrapes the bedding under him; the abdominal muscles are hard, the flank contracted. His back is stiff, and every time he moves he groans loudly. It is the same at the time of defecation and micturition. In walking the movements are stiff, and when made to turn short it is with difficulty, and the loud groan he gives indicates great pain. Fearing a fracture by exclusion, the owner was advised to bring the horse to the college, where the same condition was observed and the diagnosis confirmed. After twenty-four hours the horse was unable to get up, and was killed. At the autopsy a comminuted fracture of the seventeenth dorsal was found. Can such a lesion be cured? asks the author.—(*Ann. de Bruxelles.*)

## FRENCH REVIEW.

By Prof. A. LIAUTARD, M. D., V. M.

ERUPTIVE AFFECTION IN THE HORSE DUE TO TICKS (IXODES REDUVIUS) [*G. Joly*].—Have these insects something to do with the icterus of Leblanc? Such is the question asked by the author, when contemplating the eruptive disease which has appeared on several horses which had been grazing in the forest of Fontainebleau last May. *Case I.*—An officer's saddle horse has a skin eruption on the head, neck, and the four extremities; it looks like horse-pox. No itching nor fever; the buccal and nasal membranes are healthy. There are numerous papulæ varying in size, with a yellow secretion, gluing the

hairs together; is easily raised with the epidermic layer, which exposes a little cavity. The dermic surface underneath is a pale rose, and shows embedded in it a blackish little parasite. With strong pressure and fine forceps it is extracted. *Case II.*—A horse has his legs covered with pimples from the foot up to the knees and hocks. No fever, no itching. The crusts of the papulæ raised show the same little parasite, which when placed on the hand moves away rapidly. Prof. Neumann recognized these parasites as nymphæ of *ixodes reduvius*. The diagnosis is easy, and the treatment consists in the extraction of the insect from the papulæ.—(*Revue Veterin.*)

PSEUDO-MENINGITIS DUE TO PREVERTEBRAL ABSCESS OF THE NECK [*Prof. Cadéac*].—A six-year-old horse, after suffering with distemper, complicated with facial paralysis, later presented alarming symptoms: loss of appetite, severe constipation, painful action in moving, paresia of the right lateral biped; the right eye was partly closed, ears erect and stiff, jaws contracted; the membrana nictitans covers the eye as soon as the hand is passed before it. There is contraction of the neck, and the skin of that region is the seat of severe hyperasthesia. The animal rebels against exploration of the poll. Lockjaw was at first suspected, when a fistula appeared on the superior border of the neck, from which abundant suppuration escaped. The horse was thrown, the fistula freely opened, and masses of necrosed cervical ligament were extracted. Very rapidly the horse improved, and all symptoms disappeared. These meningeal manifestations seem to have been entirely due to the pressure of the pus upon the roots of the nerves of the rachidian opening.—(*Journ. de Med. Vet. and Zoöt.*)

TETANUS: CONTRIBUTION TO A NEW TREATMENT [*Dr. G. Fontibasso*].—This mode of treatment had already been tried by M. Trelut, who obtained a recovery by it. The author having a severe case in a six-months-old colt, due to a mild puncture of the foot, in which the symptoms were exceedingly severe, decided to experiment with the treatment of M. Trelut, viz., hypodermic injections of blood from the sick animal. After shaving and disinfecting the skin, the author extracted 50 grammes of blood from the left thoracic vein, and injected 5 grammes on each side of the neck. The balance (40 grammes) is kept in a dark, cool place in a sterilized bottle. The next day injections of 5 grammes of the serum of that blood, mixed with 5 of tepid sterilized water, are made. In the evening another bleeding of 10 grammes, the serum from which is injected

the following morning. After these first two days, there is marked improvement. Same treatment third and fourth days. In five days the animal takes milk easily, and in three weeks he was in perfect health. Lockjaw is so severe an affection that it justifies all therapeutical audacities, and perhaps the two successes obtained by this mode of treatment may be tried by others.—(*Journ. de Med. Vet. and Zoöt.*)

RUPTURE OF THE BLADDER FOLLOWING A CASE OF HÆMORRHAGIC CYSTITIS DUE TO VEGETATIONS IN A COW [*P. Bitard*].—This is the case of a six-year-old cow, seven months pregnant, which about a year previous had presented all the symptoms of acute cystitis, from which she seemed to have recovered. For several months she was well, until toward her six months of pregnancy, when it was noticed that her urine was cloudy, thin, bloody, micturition being at first difficult and afterwards taking place only with violent efforts. She had some colicy pains. Briefly the author was called, and after close examination, rectal exploration, etc., he was at first perplexed as to his diagnosis, but at a second visit, after a vaginal exploration with the manifestations presented by the cow, he made the diagnosis of rupture of the bladder. At the autopsy all the symptoms of cystic peritonitis were observed. In the bladder the mucous membrane shows extensive ecchymosis covering a tissue of new formation, assuming the form of rounded nodules as big as an almond, having the color of black asphyxiated blood, and having the aspect of black berries. These characteristic vegetations of hæmorrhagic cystitis existed on the anterior cul-de-sac and floor of the organ, and in larger number and bigger size at the seat of the rupture and the vesical neck.—(*Progrés Veterin.*)

IMPROVED METHOD OF THE OPERATION OF NEUROTOMY [*R. Bissauge*].—After reviewing many of the complications which are likely to follow the operation, the author describes a slight modification of the *modus operandi*, which he believes for him has been the means of avoiding the sequelæ sometimes met with by the old method. He proceeds as follows: After the usual antiseptic cares and the ordinary first steps of the operation, the section of the nerve is made with the smallest blade of the zoo-cautery. The section must be made quite slowly; it is accompanied by severe struggling of the animal, but is nevertheless easily made, when the nerve has been well isolated. Of course the first section is made upwards. The remainder of the operation is as in other operations. The cutaneous wounds

heal by first intention. This section with the cautery has several advantages; it secures complete antisepsy of the two nerve ends, a sufficient cauterization to prevent their reunion and the return of sensibility. While all accidents may not be prevented, it is certain that they will be less frequent by this mode.—(*Rec. de Med. Veterin.*)

RUPTURE OF THE SPLEEN IN A HORSE [*M. Pruneau*].—A four-year-old received a kick on the right hypochondriac region. Swelling as big as a hen's egg, growing gradually, and soon extending to the abdomen and left side of the chest are the consequences. A few days later, while being tied up, he pulls backwards, the rope of the halter breaks, and he is violently thrown back, and after getting up falls down again, and remains unable to rise. Then his breathing is slow, loud; there is abundant perspiration; the mucous membranes are pale; the pulse cannot be felt; the pupil is dilated; the beatings of the heart strong but separated; rectal temperature 36.8° C. Internal rupture following fracture of the vertebral column is the diagnosis. After a time, and with much difficulty, the horse gets up and presents the following symptoms: Head and neck hanging, hind legs kept apart, hind quarters trembling; respiration very loud, anus open. The animal died an hour and a half after the accident. At the post-mortem, extensive subcutaneous ecchymosis in the cellular tissue. On opening the abdominal cavity 12 or 13 litres of blood are found. The spleen is quite large, and large clots of blood on its internal face, one of which was oozing through a laceration involving the external coats of the organ and the superficial splenic pulp. This laceration existed along the border of insertion of the suspensory ligament.—(*Rec. de Med. Veterin.*)

SYNOVIAL CYST OF THE KNEE IN HORSES [*M. C. Lesbee*].—This case shows that synovial cysts may appear not only at the hock, but also on the carpus and everywhere when a synovial *cul-de-sac* exists, with a narrow opening, and when the entrance and exit of the synovia is permitted only with limited motions of the parts. A seventeen-year-old mare has, for several years, presented on the external face of the left knee a small tumor, as big as a small orange, situated about the suscarpal bone, between the radius and the flexor tendons of the metacarpus. The anterior face of the knee is free from swelling or tumor. The walls of the cyst are much stretched when the horse has his leg at rest. There is no lameness. The classical treatment by injection of tincture of iodine is resorted to and performed

with the animal standing. Several hours after the operation there is warm and painful swelling of the region. This lasted 48 hours; then resolution started in and was completed in fifteen days.—(*Journ. de Med Vet. and Zoöt.*)

## BIBLIOGRAPHY.

SIXTEENTH ANNUAL REPORT OF THE BUREAU OF ANIMAL INDUSTRY FOR THE YEAR 1899. Washington, D. C.

This volume reached me quite late, and could not be noticed before. As many of its predecessors, it forms quite a large volume, nearly 800 pages, and contains many illustrations relating to several of the interesting subjects which are presented to the reader. Of course, the 16th Annual Report is made under the direction of the Chief, Dr. D. E. Salmon, and that is saying enough to assure our readers that all the documents which the volume contains have passed under his close observation and criticism.

The volume begins with a kind of introduction by the general report of the Chief Meat Inspector with many statistics, the inspection of pork, of vessels, of export animals, of Southern cattle, the prevention of scabies, black-leg investigations, Texas fever at home and in the West Indies, etc., etc. The preparation of tuberculin, mallein, serum for hog cholera and swine plague, and many other points relating to various divisions of the Bureau are considered by Dr. Salmon, who concludes the general report by a number of special recommendations for the coming year, important among which I read the following, which are most interesting to our colleagues: That the meat inspection force be increased, that measures for excluding sheep affected with scabies from the channels of interstate commerce be rigidly enforced, that the distribution of black-leg vaccine be continued, that representatives of the State experiment stations be instructed in the manufacture and use of antitoxin for hog cholera and swine plague, etc.

What may be considered as the first chapter of the report relates principally to experiments with Texas fever and Southern cattle ticks. It contains from E. C. Schroeder, M. D. M., and W. E. Cotton articles on "Growing of non-infected ticks and afterwards infecting them," on "the vitality of the Southern cattle ticks," on "the persistency of the Texas fever organism in the blood of cattle," and on "Experiments with blood

and serum injections in connection with Texas fever investigations."

After this I find from Dr. Salmon, occupying nearly 50 pages, a masterpiece entitled, "Some Examples of the Development of Knowledge Concerning Animal Diseases." Introducing the subject by remarks upon the progress made during the closing century in the domain of animal diseases, and making a clean distinction of the means of study and observation which had been used during the 18th, and up to the beginning of the 19th century, the author is brought to the consideration and comparison of the effectiveness of observation with and without experimentation. First, it is the efforts made to discover the circulation of the blood by observation as done previous to Harvey, and then the experiments which this great physiologist undertook, and which allowed him to explain and to prove how this important function was performed.

From this one may gather what the balance of Salmon's article is going to be: A plea for experimental studies in their application to contagious diseases. Glanders and farcy open the march, and, after considering the long-lasting difference of opinion among the highest authorities in veterinary medicine, relating to the contagion or non-contagion of those diseases, how the question was settled by experiments. Variola is then considered, with the discovery of Jenner, which gives mankind a preventive of small-pox. Small-pox, cow-pox, and horse-pox then gave rise to series of experiments to the effect of establishing their relation. Pleuro-pneumonia, anthrax, blackleg, Texas fever, rabies, and others since have all given to scientists opportunities for investigations by experiments, and it is by those that the cause, nature and prophylaxy are known to-day in a manner which observation alone could never have given.

Although Dr. Salmon's article refers only to those few contagious diseases his reasoning applies to all, and is one of the strongest arguments in favor of experimental research that I have read since the day of Bouley's work, "Le Progrès en Médecine par l'Expérimentation," published in 1882.

After this article there are several communications of interest, among which stand those of Dr. E. A. de Schweinitz, on culture media for biochemic investigations, on examination of milk; of Dr. V. A. Norgaard on the seventh international veterinary congress, and on the nature, cause, and economic importance of ovine caseous lymph adenitis; of Dr. Ch. W. Stiles and Dr. A. Hassall on parasites; a short article on three trema-

todes, flukes, which they have had opportunity to study. One, a muscle fluke, found in the muscles of swine; another, a lung fluke, found also in swine and had already been observed in man, tiger, cat, dog, and other animals; the third is the cervical fluke (*amphistoma cervi*), found in some cattle slaughtered in the United States. Mrs. Louise Taylor, B. A., M. S., of the Zoölogical Laboratory, gives an article on the kidney worm of swine (*sclerostoma pingincola*), relating to the present knowledge of the parasite. This is also well illustrated.

The volume is completed by the rules and regulations of the Bureau of Animal Industry and the State laws of sanitary medicine relating to the control of contagious diseases. A. L.

## CORRESPONDENCE.

### THE BANQUETS OF THE A. V. M. A.

ITHACA, N. Y., Dec. 12, 1901.

*Editors American Veterinary Review:*

DEAR SIRS:—On page 596 of the REVIEW for October of this year, in speaking of the response of Dr. Salmon to the toast "National Sanitary Work," regret is expressed that it could not be placed in enduring form—"the pity is it was extemporaneous." It is a far greater pity that more of these responses are not worthy of preservation. The regret expressed in reference to Dr. Salmon's response was possibly the first instance of the kind in the history of the association, and it is possibly the first case where such expression was preëminently proper.

The banquets of the A. V. M. A. habitually fall below the intellectual standard which should prevail, and do not properly represent the intelligence of the veterinary profession in America. Our association contains plenty of men capable of voicing sentiments worthy of remembering. Our toast *menu* is too dry and our food *menu* at times shows a tendency to be too wet.

So far as most members are concerned, the toast list is prepared in secret by a secret committee, the *personnel* of which the general members do not know, and a toastmaster selected and toast-list prepared and printed, but not distributed, nor its contents made known until the banquet table is reached. For the average veterinarian to discover his name on the toast-list, when he reaches the banquet hall, destroys in a large measure the anticipated happiness of the occasion; his thought must

continually stray from the desired conversation with his associates to the task set before him, of replying in a creditable manner to a toast, perhaps not relevant to his aptitude or training, and if far down on the list, he cannot well prove a profitable listener to the responses of others for like reasons. As if this were not enough, the toastmaster usually feels called upon to spring some surprises toward the end by unexpectedly calling upon some member to respond to a toast wholly out of harmony with his position or attainments. This is at times construed as the toastmaster's wit, at others it is suggestive of a deliberate attempt to put an enemy in an embarrassing position.

The training, the daily life of most veterinarians does not fit them for creditable extemporaneous speaking. It is not necessary, nor even advisable, that members should appear with written responses to toasts, but if each respondent knew days or weeks in advance what would be expected of him, he could go to the banquet table mentally prepared and be left free to enjoy the pleasures sought, and when called could express his thoughts more concisely and render our banquets infinitely more enjoyable from an intellectual standpoint. If the speeches at our banquets could be made uniformly clean, concise, thoughtful and inspiring we could without fear of small attendance return to the usual custom of placing it at the close of the meeting and letting it serve as a happy benediction after the more arduous labors of the convention. W. L. WILLIAMS.

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COMMITTEE OF DISEASES, A. V. M. A.

*Editors American Veterinary Review:*

DEAR SIRS:—The committee has had outlined for its work for the present year, the study of "anthrax" to determine accurately the prevalence of the disease, its differential diagnosis, bacteriological investigation, efficiency of, and dangers attending, vaccination, modes of transmission, post-mortem appearances, and all data pertaining to this violeut scourge.

It is the earnest desire of this committee to have reports from every reader of the REVIEW in the hope of adding to the summarized report some phase of the problem and means of combatting this disease. The authors of these reports will be given due mention in this report, which will be published in the proceedings of the A. V. M. A. Answers to the following questions will be welcomed by the chairman of this committee:

1. To what extent is anthrax prevalent in your vicinity?
2. What has been your experience in treating this disease?

3. Have you used anthrax vaccine? If so, what has been your method and what have you accomplished by its use?
4. What other diseases, in your opinion, are similar in general appearances, and how do you make differential diagnosis?
5 How do you dispose of the carcasses and give your opinion as to the very best practical method?
6. Have you noticed how long the vaccine protects against the disease, or how long a mild attack renders the host immuned against a subsequent one?
7. Have you noticed any differences in the virulence of the disease which could be attributed to climatic conditions?
8. What, in your opinion, is the greatest factor in the transmission of the disease?
9. While making post-mortems did you notice any distinct features or conditions which were contrary to the general text book description?

The committee will be pleased to learn of anything relating to this disease which is original with the practising veterinarian or bacteriologist and any suggestions will be welcomed relating to the various theories in the hope to establish a good general outline for the profession to follow in preventing and combatting these outbreaks.

Committee { E. M. RANCK, *Chairman*, Phila., Pa.
JAMES LAW, Ithaca, N. Y.
A. T. PETERS, Lincoln, Neb.
L. FROTHINGHAM, Boston, Mass.
R. R. DINWIDDIE, Fayetteville, Ark.

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## BROMHYDRATE OF ARECOLINE.

ATTICA, OHIO, Dec. 7, 1901.

*Editors American Veterinary Review:*

DEAR SIRS:—Referring to article in REVIEW for September, Vol. XXV., No. 6, page 405, entitled "Azoturia—New Treatment—Bromhydrate of Arecoline," will you please state through your next journal where this drug can be obtained. Our druggists know nothing of it. Yours respectfully,

ANDREW FREY, V. S.

[ANSWER.—It can be supplied by Merck & Co., or Eimer & Amend, New York; or Parke, Davis & Co., Detroit, Mich.—EDITOR REVIEW.]

# OBITUARY.

## RUSH SHIPPEN HUIDEKOPER, M. D., VET. (ALFORT.)

This well-known veterinarian died at the Presbyterian Hospital, Philadelphia, Pa., Dec. 18, at 6.30 A. M., after an illness of nearly two months, pneumonia being assigned as the immediate cause of death, though he had been suffering from a complication of diseases.

The deceased was born at Meadville, Pa., May 3, 1854, and was educated at the Phillips Academy, Exeter, N. H., and the University of Pennsylvania, from which he graduated with the degree of M. D. in 1877. Dr. Huidekoper's grandfather was Harm Jan Huidekoper, who came to this country from Holland in 1796, and settled in Meadville, where he organized a Unitarian Church and founded a theological school. Edgar Huidekoper was the father of our deceased colleague, and he was a writer of note upon theological subjects, while his mother was a daughter of Judge Henry Shippen. He is survived by his widow, who was Miss Anne Preston Morris, of Media, and by his brothers, General H. S. Huidekoper, of Philadelphia; F. W. Huidekoper, of Washington, D. C., and his sisters, Mrs. Frank Wells and Mrs. H. P. Kidder, of Boston.

After graduating from the medical department of the University of Pennsylvania, he became coroner's physician for a short time, and was with the National Guard for twelve years, rising to the rank of division surgeon in 1892, when he removed to New York City and severed his connection with it.

With the exception of the time he served as coroner's physician, assistant surgeon to the University Hospital, and on the staff of the Philadelphia Dispensary and Children's Hospital, it is not known that Dr. Huidekoper practiced human medicine, his fondness for animals giving him a decided preference for veterinary medicine. With the object of attaining a thorough veterinary education he entered the National Veterinary School at Alfort, France, where he graduated about the year 1881. Desiring to place himself in the very front rank of his new profession, he sought the famous laboratories for the study of bacteriology, then just dawning upon the medical world, and successively studied under Virchow, Koch, Chauveau, and Pasteur.

When he returned to America, discarding the offer of a professorship from Harvard Universisy, he set vigorously to work

to build for his *alma mater* a veterinary department, and to this great undertaking he threw his whole energetic nature, his wealth of name and fame, for while the University of Pennsylvania was willing to accept the new department as one of its schools, it flatly declared that it would not expend a penny toward accomplishing that object. Not dismayed by the lack of financial support from that source, Dr. Huidekoper succeded in interesting the late J. B. Lippincott, the publisher, in the enterprise, as well as Joseph E. Gillingham, the extensive lumber merchant, the former of whom gave $30,000 and the latter $10,000. With this sum the handsome buildings in which the veterinary branch of the University has its location were erected. The grounds at 36th and Pine streets, which were donated by the city, occupy a space about two blocks in extent. Even in their embryonic condition the buildings had a street frontage of over 250 feet, and comprised a commodious amphitheatre and museum, an anatomical or dissecting room, a histological laboratory, a blacksmith shop with eight forges, a pharmaceutical laboratory and several large stables for hospital purposes.

Through a disagreement with the Trustees of the University, Dr. Huidekoper severed his connection with the veterinary department in 1892, and removed to New York, engaging in private practice and holding a lectureship on sanitary medicine at the American Veterinary College for one session, resigning at its close, when he became a professor at the New York College of Veterinary Surgeons, becoming associated in practice also with Dr. H. D. Gill, who was at that time dean of the school. He continued teaching and practicing in New York until the outbreak of the Spanish-American war, when he was appointed by President McKinley as Chief Surgeon of the First (General Brooke's) Army Corps. At Camp Thomas, Chickamauga, he was called a "horse doctor" by General Sanger. Dr. Huidekoper afterwards proved his competence and showed that the stigma sought to be attached to him had its origin in the fact that he had been a veterinary surgeon as well as a regular surgeon and physician.

At the close of the war, the doctor espoused the cause of the army veterinarian and worked very hard to secure favorable legislation. During the session of Congress of 1899-1900 the pay and allowances of second lieutenant were secured, and in the spring of 1900 a veterinary corps bill was successfully engineered through the Senate, then through the House, but was defeated on its resubmission to the Senate. While all the credit

of these successful *coups* is not due to the deceased, his share was a very large one. Last fall while he lay in bed at Washington, suffering from an acute attack of pneumonia, he continued to keep up a fusilade in behalf of the Army Bill, having a stenographer constantly at his bedside, and a messenger in easy call, sending letters to every one where he thought a vote could be secured.

After the failure of the Army Bill, Dr. Huidekoper returned to Philadelphia, where he became a partner in practice with Dr. W. Horace Hoskins, with whom he had been associated in an editorial capacity for a number of years.

There was scarcely an honor in the gift of the veterinary profession of his country and locality which has not been his. Thrice President of the United States Veterinary Medical Association, President of the New York State Society, of the Veterinary Medical Association of New York County, the New York Board of Veterinary Examiners, and of the various Pennsylvania societies. He was for many years senior editor of the *Journal of Comparative Medicine and Veterinary Archives;* author of a text-book on the age of domestic animals, a treatise on the cat, editor of the Veterinary Blue Book, and other works of minor note.

He was buried at Meadville, Dec. 20, and a large delegation of his Philadelphia colleagues accompanied the remains to their last resting place.

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[*From the Journal of Comparative Medicine and Veterinary Archives for December.*]

RUSH SHIPPEN HUIDEKOPER.

A great leader has fallen. The mantle of death has closed the earthly career of a strong man; strong in that which is best remembered of men's lives. His may be classed among those who are said to have led strenuous lives, clothed by nature with great physical strength, remarkable will power, great force of character, and endowed with a goodly share of worldly wealth; a man of the highest and best ideals in all that he elected to do, successful in a remarkable degree along lines that are too seldom counted as the highest winnings of the world. He touched nothing that he did not leave it better than he found it. In veterinary journalism, he raised it to a higher plane; in college work he made it stronger and better than ever before; in State Legislature he aimed always at the highest ideals of professionalism; in State Boards of Examiners he ever advo-

cated a higher plane of work; in the field of association work he strove always to make loftier its aims and purposes; in his masterful leadership for recognition and rank of his profession he never forgot, in the battles he waged, the higher purposes to be obtained for the true growth of his profession. In all of these spheres of work as editor, teacher, officer, practitioner, examiner and leader he gave lavishly of his time, liberally of his means, and spent unselfishly of his wonderful energy and indomitable courage in making successful, in a remarkable degree, these higher ideals that he ever held of what he singled out to do.

Unselfish in all that he did, frank and honest in all his dealing with his fellow-man, unresentful of any blows aimed to do him harm, and with the utmost confidence in all whom he met, such was the life of Rush Shippen Huidekoper, who has passed from our midst too soon.

## DR. THOMAS F. BARRON.

On November 20 Dr. Thomas F. Barron, of Baltimore, Md., died from heart failure, as a result of acute gastritis, in his fifty-ninth year. He had been in rather poor health for a few months, but his death was not anticipated until a few days before its occurrence.

The deceased may be said to have been a pioneer in the profession, having been in active practice prior to the attainment of his majority; his father (who was a self-made man, there being no veterinary colleges in this country in his day) having been a skillful practitioner, and amassed quite a comfortable fortune from it. His son, the subject of this sketch, succeeded to his father's large business, and was even more successful than his sire. He was a student of the best professional literature, and possessed a well-chosen library of standard text-books and contemporaneous works.

He was a member of the Maryland State Veterinary Medical Society from its earliest days, and was also a member of the American Veterinary Medical Association, having joined it in 1887, and regularly attended its meetings when possible.

At a meeting of the Maryland State Veterinary Medical Society, held on Thursday, December 5, 1901, the following minute was adopted:

Inasmuch as Divine Providence has removed from our midst our late associate, Dr. Thomas F. Barron, one of the pioneers of the veterinary profession in Maryland, we desire to record the deep sense of our loss of

the gentlemanly attributes and the proficient professional ability possessed by him and accorded to all; and, further, to express to the one who mourns most deeply his decease our sincere sympathy and condolence. WM. H. MARTENET, D. V. S., *Secretary.*

## SOCIETY MEETINGS.

### KEYSTONE VETERINARY MEDICAL ASSOCIATION.

The regular monthly meeting of this association was held at the regular meeting place, N. W. corner Broad and Filbert streets, Philadelphia, on October 8th. Dr. Carter, acting as chairman, called the meeting to order at 9 o'clock, when the following members of the profession were present: Drs. Schreiber, Marshall, Adams, Harger, Lintz, Huidekoper, Carter, Mahaffey, Hoskins, Rhoads, Eves, Gardiner, and Ranck. The minutes of the previous meeting read and approved. There being no regular papers prepared, Dr. Harger made an elegant address on raw, pasteurized, and cooked milk, taken from Bulletin No. 77 of the Maryland Agricultural Station, published August, 1901, and compiled by C. F. Doane and T. M. Price, the conclusions of which were:

(1) Raw milk is more easily digested when fed to calves than either pasteurized or cooked milk.

(2) Contrary to theory, cooked milk when fed to calves used in these experiments caused violent scouring in the majority of trials.

(3) A majority of physicians in charge of children's hospitals corresponded with, favored the use of raw milk for infants when the milk is known to be in perfect condition, but favored pasteurized milk under ordinary conditions.

(4) With one exception, all the physicians corresponded with discourage the use of cooked or sterilized milk for infant feeding.

(5) Skim milk was found to be as digestible as whole raw milk.

This valuable talk was freely discussed by Drs. Adams, Hoskins, Schreiber, Lintz, Eves and others.

An interesting question was proposed by Dr. Hoskins in relation to a condition existing on a valuable dairy farm in which contagious abortion has appeared, and the puzzling part of it is, how are we to meet these conditions when found? The question brought forth many suggestions from the members present.

Next in order was the lunch, which fortunately did not menace the literary part of the programme.

Election of officers came next, with the following results:

President—Dr. W. L. Rhoads.

Vice-President—Dr. J. W. Adams.

Secretary—Dr. E. M. Ranck.

Treasurer—Dr. C. J. Marshall.

Directors—Drs. W. Horace Hoskins, H. P. Eves, A. F. Schreiber, B. M. Underhill, and J. D. Houldsworth.

Promises were given for the preparation of papers from Drs. Adams and Harger for the November meeting.

A general experience meeting followed, in which every one present promised to do the best he could to make this season's meetings successful, after which the meeting adjourned at 11 P. M.

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The regular monthly meeting of this association was held on November 12th, 1901, at N. W. corner of Broad and Filbert streets, with the following members of the profession in attendance: Drs. Bunting, Carter, Drake, Fuller, Flood, Gavin, Gorman, Kooker, Lintz, Marshall, Hoskins, Pearson, Williams, Rhoads, Ridge and Ranck. Also about fifteen students of University of Pennsylvania, Veterinary Department. The minutes of previous meeting were read and adopted. Communications were read and acted upon separately, one of which was from one of the oldest and most active members, Dr. Jas. B. Rayner, of West Chester, who wished to resign, owing to impaired health. A motion to accept his resignation was carried, as was also a motion to elect him to honorary membership. The rules and by-laws having been suspended, he was unanimously elected an honorary member.

A very interesting paper was read by Dr. Bunting, of New Jersey, in which he cited numerous cases of failure from the tuberculin tests, also a peculiar affection of the heart, which he attributed to the tuberculin. This paper elicited a great amount of discussion, in which all the members participated, and was finally closed by Drs. Pearson and Hoskins. A vote of thanks was extended Dr. Bunting by the society for his interesting paper.

The other essayists being unavoidably absent, the Chair asked for reports of cases, in which the topic of "The most humane and efficient methods of killing animals" was propounded by Dr. Williams. This again brought forth many different

methods, but the majority present seemed to favor chloroform for small animals, while for cattle and horses strychnia sulphate in sufficient doses intravenously seemed to be the best method. This topic is one of great interest, and should be discussed by other veterinary associations, so the profession throughout the country could be properly instructed.

Dr. Kooker reported an interesting case of purpura hæmorrhagica, which developed marked symptoms of azoturia, and, strange to say, is getting better, and a complete recovery seems certain.

Dr. Hoskins, who was the Pennsylvania representative on the Committee of Arrangements for the last annual meeting of the A. V. M. A., reported that he has a balance of $30 after all expenses had been paid, and asked what the members suggested. He stated that a certain member of the profession was in need of money, and, being an invalid, had no earning capacity, and furthermore, this member had been for many years a very earnest worker and active practitioner, so he suggested we donate to him one-half of the above sum.

The Secretary suggested that probably the next in turn to be a beneficiary, who was also in urgent need of funds, was the Keystone Veterinary Medical Association, and upon the suggestion a motion was made and carried, that the remaining $15 be donated to this association.

Dr. Pearson offered the following resolution:

*Resolved*, That the President of the Keystone Veterinary Medical Association is hereby authorized and requested to appoint a special committee of five to investigate and report upon matters pertaining to the milk supply of Philadelphia as follows: (1) To what extent are the claims of Philadelphia milk dealers in respect to the sanitary and veterinary inspection justified? (2) What precautions are used by managers of hospitals to procure pure and wholesome milk for the use of the persons under their care?

Interspersed with the above business the entertainment committee, under the leadership of our President, Dr. Rhoads, furnished us with a delightful luncheon with the necessary *addenda* to make the meeting something more than a dry, dull, business affair.

The Secretary announced the programme so far as could be determined at this time, after which we adjourned at 11 P. M.

E. M. RANCK,
*Secretary.*

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The December meeting of this association was held at

north-west corner of Broad and Filbert streets, December 10th, 1901, with the following members of the profession in attendance: Drs. Houldsworth, Pearson, Eves, Goentner, Hoskins, Marshall, Rhoads, Underhill, Ridge, Williams, Powell, Lintz, Sellars, Harger, Carter, Gilliland and Seidel of veterinary profession, and Dr. M. P. Ravenel of medical fraternity. About 35 students of the Veterinary Department of University of Pennsylvania were also in attendance. After the regular business was transacted Dr. Pearson delivered an address on "Observations from Foreign Veterinary Colleges," giving all the details of the buildings, business management, students' homes, as well as the connections with State or Government. He took as a basis the Berlin school, which is the oldest in Germany, being founded 110 years ago. It stands on the ground on which it was founded, a tract of ground 25 acres on the outskirts of the town, but since its foundation the city has grown so that residences and stores are built all around the college. They are at present building a new structure to be used exclusively for teaching anatomy. On the first floor are rooms for janitor, storage and freezing. On second floor are rooms for dissecting; these rooms are supplied with large skylights and stationary tables. The third floor is used for a museum of anatomy. Another new building is used for department of hygiene under Professor Ostertag, who teaches meat and milk inspection and bacteriology. Every appliance is to be found here, and this department is directly under the Professor and six assistants. Connected with this building stable accommodations for experimental animals for antitoxins and other diseases not due to bacteria, helminths, etc. A large dog hospital also on upper floors, used as a pharmacy, contains rooms for clinic, operating and ward. A large cow stable built on model plans for 40 cows of the most improved types and breeds. This is kept and managed as a model dairy and the milk is sold to the neighborhood. The clinics and hospitals for large animals are all one story buildings arranged in a court, consist of blacksmith shop, operating room, clinical rooms, special rooms for surgical cases, riding school, exercise rooms, isolation wards; there is also provided a ward for animals suffering from internal and infectious diseases. The courtyard is covered with soft sand, through which horses are led to test for soundness. The capacity of hospital is about 100 horses. From twenty to fifty animals are treated in clinic daily. A large dormitory building for r i-tary students is provided and supported by the government.

These students must serve as long in the army as they spend in the college.

The other schools are on general plan very much as Berlin, some teach special branches to the detriment of others. The Hanover school is the newest equipped. The Dresden school is hampered for room. The Munich school has been recently re-equipped. At Stuttgart is to be found the well known Hoffman table for operating on horses, on which 1200 horses have been operated upon in two years, without an accident.

The Budapest (Hungary) school is comparatively new, having been built about 15 years ago. This school is supported by the government. It must be admitted that schools supported by governments are better equipped than those which are not, this accounts in a large measure for our inferior schools here in the U. S.

The London school founded by Bell in 1792 stands on leased ground and supported by friends of the school and students. The examinations are conducted by a committee appointed by the Royal Veterinary Society and graduates who pass this examination are admitted to this Society. Before concluding this valuable discourse Dr. Pearson drew some valuable and interesting comparisons with our schools and pointed out their advantages and disadvantages but thought they were gradually developing toward continental systems.

Dr. M. P. Ravenel, bacteriologist for the Pennsylvania Live Stock Sanitary Board, having been abroad as a representative from this Board, at the "Tuberculosis Congress at London" was the next speaker for the evening. Dr. Ravenel was one of the first men to take issue with Prof. Koch's statement as to the communicability of tuberculosis from cattle to men. He says in part that Koch's statement was entirely too sweeping and too radical; he overlooked the statistics of other pathologists; he was irrational and unreasonable; for the following reasons: First, that no animal is absolutely immune to tuberculosis. Second, several cases definitely known, and many cases not clearly proven have been placed on record in which the infection was traced to the bovine species. Third, it has been definitely proved that any infections or contagious disease which attacks three species of animals, is also transmissible to man. Dr. Ravenel then explained that all the findings and experimental work brought forward by the Tuberculosis Congress were nothing new, for under the plans which Dr. Leonard Pearson formulated for experimental investigation for the S. L. S. S. B. of Pennsylvania

on tuberculosis, covered all the essential features and in fact some of them were entirely new to foreign experts. Dr. Ravenel thinks that this agitation will bring good results, for, although there is now a storm of protest it will also result in vast experimentation all over the world and thus end in some definite scientific conclusion.

A vote of thanks was tendered Drs. Pearson and Ravenel by the Association for their well prepared and instructive addresses.

The next in order was a carefully prepared paper on "A Case of Tetanus, with Antitoxin Treatment" by Dr. B. M. Underhill, of Media. The doctor used antitoxin in large doses, which seemed to ameliorate the condition and the horse is evidently making a prompt recovery. This paper caused a great amount of discussion, which was entered into by Drs. Williams, Harger, Sellars, Ranck, Eves, Ridge, Goentner, Pearson, Marshall, Hoskins, Rhoades and others. The consensus of opinion favored tetanus antitoxin as a valuable prophylactic measure, but not always a reliable curative measure.

Dr. Pearson then made a motion to have the President appoint a committee to frame resolutions to be sent to Governor Stone favoring Dr. Hoskins' re-appointment on the State Examining Board. Carried. The committee appointed consisted of Drs. Goentner, Marshall and Ranck. The following committees were appointed by President Rhoads:

*Committee on Milk.*—W. H. Hoskins, Chairman; H. P. Eves, W. L. Rhoads, W. H. Ridge, Leonard Pearson.

*Committee on Diseases.*—C. J. Marshall, Chairman; E. M. Ranck, J. R. Mahaffey, J. D. Houldsworth, J. M. Carter.

*Programme Committee.*—E. M. Ranck, Chairman; James Mecray, B. M. Underhill, W. S. Kooker, A. F. Schreiber.

*Press Committee.*—J. M. Carter, Chairman; C. T. Goentner, Chas. Lintz, Francis B. Ridge, Thomas B. Rayner.

After the announcement of the above committees the programme committee secured papers for our January meeting from Drs. C. J. Marshall and S. J. J. Harger, the subjects of which will be furnished later. A motion to adjourn was carried, to meet the second Tuesday evening in January.

E. M. RANCK, *Secretary.*

## MISSOURI VETERINARY MEDICAL ASSOCIATION.

The tenth annual meeting of this State association was called to order in the lecture rooms of the Kansas City Vet-

erinary College, at 10 A. M., October 22d, 1901, by the President, Dr. F. W. O'Brien, of Hannibal. The following veterinarians were present: Drs. M. McNally, F. W. O'Brien, B. F. Kaupp, W. E. Martin, J. W. Connaway (Missouri Experiment Station), Stanley Smith, R. C. Moore, Chas. Doerrie, S. Stewart, R. H. Carswell, L. D. Brown, F. F. Brown, Walter Warren, W. A. Nixon, H. V. Patterson, E. Brainard, A. G. G. Richardson, E. M. Nighbert, E. Lee, A. D. Knowles, W. A. Thomas, J. S. Grove, J. D. Sprague, J. S. Anderson, J. H. Gain, John Nott, Frank Linscott, Chas. Saunders, C. H. Davies, W. C. Barth, A. Trickett, W. F. Lavery, H. H. George, N. B. Smith, W. R. Cooper, C. A. Clawson, W. R. Pick, A. N. Reber, W. N. Hobbs, W. R. Andress, A. W. Swedburg, A. Plummer (4th U. S. Cavalry), A. T. Peters (Nebraska Experiment Station), A. MacDonald (4th U. S. Cavalry), and others. There were many visitors who were not veterinarians, but interested in the profession, also about 100 veterinary students. The minutes of the previous meeting were read and approved, after which a report of the Legislative Committee by Dr. D. F. Luckey, member of said committee, was read. Mr. J. A. McLane, a representative from Jackson County, gave a good report of the efforts to secure needed State veterinary legislation at the last session of the State Legislature. Moved by Dr. Connaway, seconded and carried, that a committee be appointed by President O'Brien to draft resolutions commending the Legislative Committee for its work. The committee was Dr. Connaway (chairman), Drs. S. Smith and L. D. Brown. The Legislative Committee's report was accepted and meeting adjourned to luncheon, to meet again at 2 P. M.

At 2 P. M. the meeting was called to order by the President, when the following papers were presented: "An Enzoötic Attack of Chorea among Cattle," by Dr. A. D. Knowles; "Sclerastoma Tetracanthus of the Horse," by Dr. W. E. Martin. The doctor gave a good report of some cases and illustrated his paper by demonstrations of the parasite and a portion of the affected bowel. "Pleurisy of the Horse," by Dr. F. F. Brown; "Acute Rheumatism of the Horse," Dr. T. J. Menestrina.

Under reports of cases Drs. L. D. Brown and F. W. O'Brien gave some interesting cases of parturient paresis of the cow, using Schmidt's treatment, which was discussed by Drs. Nighbert, Knowles, Stewart and others.

Dr. F. F. Brown was elected a member of the association.

The following officers were then elected for the ensuing year:

President—Dr. J. W. Connaway, Columbia, Mo.
Vice-President—Dr. Chas. Doerrie, Boonville, Mo.
Secretary-Treasurer—Dr. B. F. Kaupp, Kansas City, Mo.

A motion was then made, seconded and carried, to adjourn to meet at 7.30 P. M.

At 7.30 P. M. the meeting was called to order by the President, when the following programme was presented:

"Immunizing Northern-bred Cattle Against the Southern Cattle Fever," by Dr. J. W. Connaway, of the Missouri State Experiment Station. The doctor gave a very interesting and instructive address, using charts, pictures and instruments to illustrate the present methods used at the Missouri State Experiment Station of immunizing our Northern cattle against the Southern cattle fever.

"Tuberculosis of Cattle and Swine," by Dr. W. R. Cooper; "Actinomycosis," by Dr. H. H. George. These papers brought out a good discussion, which was enjoyed by all present.

Dr. A. Plummer (4th U. S. Cavalry), recently of the Philippine Islands, gave some interesting accounts of the *filaria occuli* in the horse in the islands; he said that it had been noted that the affection occurred in the low marshy part of the country, but was not noticed on the highlands. The operation of paracentesis always resulted in recovery. Operation was performed on inferior part of the cornea, allowing the worm to escape with the aqueous humor. The after-treatment consisted of cold applications and to keep the eye darkened.

It was moved by Dr. Connaway, seconded and carried, that we invite the American Veterinary Medical Association to meet in Kansas City in 1902.

Moved by Dr. Stewart, seconded and carried, that the exact date and place of next meeting be left with the Executive Committee. The meeting then adjourned till Oct. 23.

At 8 o'clock, Oct. 23, 1901, a surgical and dental clinic was held, which was joined in by the twenty-ninth regular meeting of the Missouri Valley Veterinary Association. Dr. E. M. Nighbert demonstrated the excellencies of the new operating table advertised. Dr. J. S. Anderson, of Seward, Neb., demonstrated the operation of hyovertebrotomy for the cure of cribbing; also the operation of aretenoideraphy for the cure of roaring. Drs. W. E. Martin and F. W. O'Brien demonstrated the passage of the stomach tube for gastric tympany, also irrigating and flushing the stomach. The procedure met with marked success, and was highly commended by those present.

After luncheon the veterinarians visited the plant of the Armour Packing Company, where a fine display of pathological specimens, which had been collected and arranged under the directions of Drs. A. G. G. Richardson, W. R. Cooper and other veterinarians of the United States Meat Inspection force at this place. The exhibit consisted of pathological lesions found in cattle, calves, sheep, and swine. Among the specimens of special interest were noted: Tuberculosis of cattle and swine, showing lesions in the carcass (in glands, serous membranes and bone), lungs, liver, spleen, etc.; actinomycosis of cattle, lesions in the head and lungs; cirrhosis, echinococcosis and abscess of liver; distomiasis, lesions in the liver and lungs of cattle; caseous lymph adenitis and nodular disease in the sheep; hog cholera in the carcass and viscera, and many other interesting specimens.

At 3 P. M. the party was conducted by the local veterinarians to the cattle show and sales, where an opportunity was afforded to make a study of judging cattle and hundreds of fine specimens of the best beef breeds, including the Hereford, shorthorn and poll angus, were seen.

At 8 P. M. the local veterinarians entertained about 40 visiting veterinarians at the Kansas City Horse Show, which was held in the famous Kansas City Convention Hall, where all had an enjoyable time, after which the party disbanded, ending one of the most successful meetings in the history of the association.

B. F. KAUPP, D. V. S., *Secretary.*

## ILLINOIS STATE VETERINARY MEDICAL ASSOCIATION.

This association held its nineteenth annual meeting at the Sherman House, Chicago, Nov. 14 and 15, 1901. The meeting was called to order by President T. J. Gunning at 10.30 A. M., and the following members were present during the meeting: T. J. Gunning, Neponsett; J. T. Nattress, Delavan; T. H. Ames, Canton; F. B. Rowan, Belvidere; V. E. Frizzelle, La Moille; W. J. Martin, Kankakee; N. I. Stringer, Watseka; R. F. Hoadley, Yorkville; H. A. Pressler, Fairbury; Albert Babb, Springfield; C. G. Glendenning, Clinton; John S. Spangler and W. B. Lewin, Russell; R. C. Mylne, Aurora; Geo. B. Jones, Sidell; E. S. Fry, Naperville; F. W. Kee, Sheldon; Clarence Mills, Decatur; Jas. Smellie, J. H. Crawford, Harvard; J. F. Ryan, W. H. Welch, Lexington: A. C. Worms, C. F.

Griiner, R. G. Walker, A. H. Baker, Jos. Hughes, Jas. Robertson, and E. L. Quitman, Chicago. Visitors: Dr. W. W. Welch, Elgin; Mr. H. A. Cole, of De Vaux Chem. Co., Mr. V. C. Baker, of Pasteur Chem. Co.

The minutes of the last meeting were read and approved.

The following names were presented for membership and on motion were duly elected:

Dr. C. G. Glendenning (O. V. C.), vouchers, Wm. H. Welch and T. J. Gunning.

Dr. Jas. Smellie (C. V. C.), vouchers, E. L. Quitman, T. J. Gunning.

Dr. W. B. Lewin (C. V. C.), vouchers, W. H. Welch, V. E. Frizzelle.

Dr. F. W. Kee (McGill), vouchers, N. I. Stringer, H. A. Pressler.

Dr. J. H. Crawford (McKillip), vouchers, R. G. Walker, Jas. Robertson.

Dr. Geo. B. Jones (O. V. C.), vouchers, T. J. Gunning, E. L. Quitman.

Dr. F. B. Rowan (C. V. C.), vouchers, N. P. Whitmore, E. L. Quitman.

On motion, the society adjourned until 1.30 P. M.

Immediately upon calling the meeting to order Dr. Gunning delivered the President's annual address.

Dr. E. S. Fry, of Naperville, now read his paper on "Azoturia." This subject brought out the usual lengthy discussion and was participated in by Drs. Martin, Quitman, Pressler, Glendenning, Lewin, Jones, Miller, Stringer, Nattress, Ryan, Baker, Newby and Hughes. A new feature in the discussion of this disease was the theory of germ origin.

Dr. T. B. Newby, of McKillip Veterinary College, now read his paper on "The Etiology of Omphalitis." He maintained that quite a number of those cases, as he had proved by post-mortem, were of intra-uterine infection. Discussed by Drs. Stringer, Hughes, Martin, Mills, Welch and Baker.

Dr. Ryan now read his paper on "Trichina Spiralis and the Hog." The discussion of his paper was postponed until Friday afternoon, and was participated in by Drs. Baker, Quitman, Griiner and Mills.

On account of the clinics to be held at the Chicago Veterinary College from 9 A. M. until 12 M. the society adjourned until Friday at 1.30 P. M.

Friday morning the majority of the members availed them-

selves of the opportunity of attending the clinics. These were varied, useful and instructive.

Dr. Hughes, who was on the programme for a paper on "Quittor and Its Treatment," took the opportunity to illustrate the surgical treatment as practiced by himself. Two or three quittors were operated on and from one of them the lateral cartilage was removed. The association now accepted the hospitality of Dr. Hughes for luncheon, after which they again met and witnessed a great many different operations performed by him. Among these were meso-neurectomy, the high and low plantar neurectomies, operation for stringhalt, operation for cribbing and caudal myotomy in all its forms.

It was nearly 4 P. M. when the society reconvened at the Sherman House. Dr. Hughes gave a few remarks on "Quittors" and was excused.

Dr. Babb having been obliged to return home, his paper was held over until the next meeting.

The election of officers now took place, and resulted as follows:

President—Dr. Joseph Hughes, Chicago.

Vice-President—Dr. H. A. Pressler, Fairbury.

Secretary—Dr. W. H. Welch, Lexington.

Treasurer—Dr. R. G. Walker, Chicago.

Board of Censors—Drs. N. I. Stringer, Watseka; J. T. Nattress, Delavan, and A. H. Baker, Chicago.

A vote of thanks was extended to the Chicago Veterinary College, also Dr. Hughes, for the magnificent clinics.

Dr. Hughes now took his chair and thanked the association for the honor bestowed upon him.

Dr. Ryan moved a vote of thanks to the retiring officers.

President Hughes appointed the following committees:

*Programme.*—Drs. E. L. Quitman, N. I. Stringer and J. T. Nattress.

*Arrangements.*—Drs. Jas. Robertson and W. J. Martin.

*Legislation.*—Drs. Albert Babb, T. J. Gunning and W. J. Martin.

Drs. Quitman and Baker spoke on the subject of trying to secure the next meeting of the American Veterinary Medical Association. It was moved and carried that the Illinois State Veterinary Medical Association, through its officers, extend an invitation to the American Veterinary Medical Association to hold its next meeting in Chicago, and that the Secretary be instructed to solicit funds for entertainment.

The following amendments to the Constitution and By-laws were offered and will be acted on at the next meeting:

ARTICLE II. SEC. 1. *Resolved*, That Art. II., Sec. 1, be amended to read "December," instead of "November."

[Signed] A. H. BAKER.
ROBERT G. WALKER.

*Amending Article II, Sec. 1, to read as follows:*

"The meeting of the Association shall occur annually in Chicago during December, at such times as may be designated by the President and Secretary.

[Signed] C. G. GLENDENNING.
W. H. WELCH.
W. B. LEWIN.

A vote of thanks was given the Sherman House for use of room. Society adjourned to meet in Peoria in February at call of President. W. H. WELCH, *Secretary.*

## MISSOURI VALLEY VETERINARY MEDICAL ASSOCIATION.

On the morning of October 23d the veterinarians in attendance at the Missouri Valley Veterinary Medical Association and the Missouri State Veterinary Association witnessed a surgical clinic, which was held at the hospital of the Kansas City Veterinary College. Dr. J. S. Anderson, of Seward, Neb., demonstrated the operation of myoneurectomy for the cure of cribbing; also the operation of arytenoideraphy, for the cure of roaring. Drs. Martin, of Perry, and O'Brien, of Hannibal, Mo., demonstrated the use of the stomach tube for gastric tympany, by passing the tube and irrigating or flushing the stomach. Dr. E. M. Nighbert demonstrated the use of the rocker operating table, employed at the Kansas City Veterinary College.

After luncheon the association inspected an exhibit of pathological specimens, displayed at the plant of the Armour Packing Company. This exhibit of specimens was arranged by Dr. A. G. G. Richardson and other inspectors of the Bureau of Animal Industry, and proved a most interesting one, as it included a great variety of diseased tissues found in the large food-producing animals. The collection was especially rich in specimens of tuberculosis, as found in cattle and swine, and included a display of carcasses and individual visceral organs, showing the disease in all stages from the involvement of a single lymph gland only, to the invasion of all parts of the body.

Actinomycosis of internal organs was another interesting feature. Numerous cases of hog cholera of various types were shown, including carcass and viscera. In sheep two diseases

were particularly typified by the exhibit of carcass and visceral organs, to wit: ictero-hæmaturia and lymph-adenitis. Much general interest was manifest in a collection of miscellaneous diseases of organs and parts, showing a variety of the diseases of the kidney, liver, spleen, etc., being particularly instructive in the line of parasitic invasion; such as the worms found in œsophagus, stomach, liver, intestines and region of the kidneys.

The association extended an invitation to the physicians and medical students of the city to inspect the exhibit, and were gratified with the very large number who availed themselves of this privilege. Dr. Richardson and his co-laborers were congratulated upon all sides upon the excellence of the exhibit for the visiting veterinarians and others. In passing, it might be well to note that the Packing Company seemed greatly interested in doing their part toward making the exhibit, and to show to the public that they were proud of the fact that all diseased meats were being separated from the wholesome, in their establishment, and that products only wholesome were being offered to the public for consumption.

After examining the pathological exhibit the veterinarians visited the extensive Cattle Show, then in progress at the Stock Yards, and saw a large and attractive display of the beef breeds. They also had an opportunity to observe the methods of judging same.

At 8 P. M. the association went in a body to the Horse Show, which was being held at Kansas City's famous Convention Hall, and it is needless to say they were especially interested in this part of the day's entertainment.

*Thursday, Oct. 24th.*—Meeting called to order at 9 A. M. by the President, Dr. A. T. Peters. Owing to the absence of the Secretary, Dr. W. Ross Cooper, Dr. S. Stewart was elected *pro tem.* There being no business before the association, the meeting proceeded to the presentation and discussion of papers. The first paper presented was one entitled the "Value of Post mortem Examinations," by Dr. E. M. Nighbert, which elicited free discussion. This was followed by a paper by Dr. A. T. Peters on the subject of "Sorghum Poisoning," which led to a long and instructive discussion by all present, not only on sorghum poisoning, but also poisoning by other forage. Drs. Plummer and Hunter described some interesting cases seen in the Philippines, and numerous reports of cases were made by others present.

A resolution was presented and adopted, inviting the Ameri-

can Veterinary Medical Association to hold its next annual session in Kansas City.

The veterinarians present at the meeting were: *Nebraska*—Drs. A. T. Peters, W. A. Thomas, T. S. Gains, Lincoln; J. S. Anderson, Seward; J. D. Sprague, David City; H. L. Ramacciotti, Omaha. *Kansas*—S. L. Hunter, Fort Leavenworth; A. Plummer, A. McDonald, Fort Riley; Chas. Saunders, Eldorado; O. Stuart, Leavenworth; Nott, Council Grove; C. H. Hobbs, Holton. *Missouri*—Chas. Doerrie, Boonville; E. Lee, Chillicothe; W. Warner, Windsor; J. Brown, Hamilton; A. Trickett, F. F. Brown, R. C. Moore, R. H. Carswell, S. Stewart, E. M. Nighbert and about seventy-five students, Kansas City.

The association adjourned to meet at time and place to be agreed upon by the executive officers.

W. R. COOPER, *Sec'y-Treas.*

## VETERINARY MEDICAL ASSOCIATION OF NEW YORK COUNTY.

The regular monthly meeting of this association for December was called to order on the evening of the 4th, in the lecture-room of the New York-American Veterinary College by President James L. Robertson, Secretary Clayton recording, and with the following veterinarians present: Drs. Bell, Clayton, Cochran, Du Bois, Delaney, Dickson, Ellis, Parry, Robertson, Ryder, Sherwood, and fifteen or twenty students of the college.

No papers had been prepared for this meeting, as a surgical clinic of sufficient length to occupy the entire evening had been announced; but owing to unavoidable circumstances only one of the subjects was presented—a patient of Dr. Parry's, with a large high bone spavin, upon which the doctor performed tarsal tenotomy.

A general discussion of professional subjects occupied considerable time, while the election of officers and a consideration of matters pertaining to the welfare of the association, made the session a pleasant and profitable one.

The election of officers resulted as follows:

President—Dr. Robert W. Ellis.

Vice-President—Dr. J. Elmer Ryder.

Secretary-Treasurer—Dr. C. E. Clayton.

The President afterwards made the following appointment of committees:

*Board of Censors.*—James L. Robertson (Chairman), David

W. Cochran, Thomas G. Sherwood, H. D. Hanson, and Cyrus W. Du Bois.

*Judiciary.*—H. D. Gill (Chairman), Robert Dickson, R. W. McCully, E. A. Parry and Wilfried Lellman.

*Programme.*—J. Elmer Ryder and Roscoe R. Bell.

As the usual date of meeting for January (first Wednesday) falls on New Year's day this year, it will be held on Friday, the 3d, and a splendid surgical clinic is announced to positively occur, the programme being as follows: Peroneal tenotomy, by R. W. McCully; tarsal tenotomy, by C. E. Clayton; vaginal ovarectomy in a mare, by J. E. Ryder; passing stomach tube, by R. W. McCully; setoning with a new style needle, by J. E. Ryder; intravenous injection of cyanide of potassium, by Roscoe R. Bell.

President Ellis starts out upon the duties of his new office with a righteous determination to use his utmost endeavors to build up this association. Under date of 17th ult., he writes: "I intend sending out some special invitations, in addition to the regular members' notices. We must fill that room this winter, and make our meetings such in reality as well as in name."

## NEW YORK STATE VETERINARY MEDICAL SOCIETY.

President James Law announces the appointment of the following committees for the year 1901–1902:

*Committee of Arrangements.*—Roscoe R. Bell (chairman), George H. Berns, E. B. Ackerman, and James L. Robertson, with Secretary Wm. Henry Kelly *ex-officio.*

*Committee on By-Laws.*—George H. Berns (chairman), and J. W. Corrigan, with Secretary Wm. Henry Kelly *ex-officio.*

## IOWA STATE VETERINARY MEDICAL ASSOCIATION.

We regret to hear that Dr. John E. Brown, for the past nine years Secretary of this excellent association, has been obliged to tender his resignation, and has removed to Chattanooga, Tenn., on account of ill health of his family. Dr. Brown has been an earnest and unselfish worker in behalf of the association, whose interests were very dear to him. The Iowans, however, have been singularly fortunate in being able at once to fill the vacant Secretaryship by so able and representative a man as Dr. John J. Repp, of the Iowa Agricultural College, Ames, and we cordially congratulate them.

The next meeting of the association occurs the latter part of this month.

## MINNESOTA STATE VETERINARY MEDICAL ASSOCIATION.

The next annual meeting of the Minnesota State Veterinary Medical Association will be held at St. Paul, Wednesday and Thursday, January 15 and 16, 1902. The clinical part of the programme will be held at the State Experiment Station with Dr. Reynolds. K. J. McKENZIE, *Secretary-Treasurer.*

THE report of the annual meeting of the Ontario Veterinary Association, held at Toronto, 20th ult., has been received from Secretary Sweetapple, and will appear in February REVIEW.

## NEWS AND ITEMS.

DR. CHARLES ELLIS, of St. Louis, Mo., has just opened a very complete canine hospital, and it is being very generously patronized.

DR. H. C. BABCOCK, an inspector in the Bureau of Animal Industry, stationed at Sioux City, Iowa, has been transferred to Kansas City.

DR. D. C. THOMAS has resigned his position as inspector in the Bureau of Animal Industry, and has returned to his old home at Rome, Ga., to take up practice.

DR. THOS. W. CARNACHAN, formerly meat inspector at Kansas City, is now stationed at Boston. Dr. Carnachan has recently returned from a visit to his native heath in Scotland.

DR. JOHN FORBES, chief inspector of the Government meat inspection at St. Joseph, Mo., has returned from a four months' visit to Scotland. The Doctor reports a most enjoyable trip for himself and wife.

VETERINARIAN J. EDWARD ROWE, JR., of Summit, N. J., has recently been appointed Health Officer of his city. Summit is the first city in New Jersey, or elsewhere, so far as we have any knowledge, to recognize the advantages of having a doctor of *comparative medicine* at the head of the Health Department.

DR. A. J. SAVAGE, of Colorado Springs, Col., started for South Africa in charge of a British transport of horses and mules, leaving New Orleans about Christmas. This is his third trip, his health (which had been poor) having greatly improved through these transatlantic journeys. He expects to return in from 70 to 90 days.

PRESIDENT WINCHESTER, of the A. V. M. A., was in New York on the 6th ult., in attendance upon the dinner of the alumni association of Amherst Agricultural College, at the Hotel St. Denis. He held up the veterinary end by responding to the toast to veterinary medicine.

DR. W. M. BROADHEAD, a graduate of the American Veterinary College, class of 1885, and later of the Jefferson Medical College, Philadelphia, Pa., and who has practiced veterinary medicine at Media, near the latter city, in that State, for the past sixteen years, visited New York City for a week recently with his wife and family, and made his former classmates glad by calling upon them.

DR. EDWARD C. ROSS, of New Haven, Ct., *en route* to the South on his regular winter trip, stopped over in New York City, and paid a visit to his *alma mater* (the A. V. C.) and some of his former classmates. The doctor is accompanied by his charming wife, and while South will be the guest of his brother, who is a plantation owner there. During his absence from the "City of Elms," the doctor's hospital and practice will be in charge of Dr. H. V. Whitney, assisted by Dr. James Turner.

DR. JUDSON BLACK, of Richmond, Mich., who will be so pleasantly remembered by all who attended the Detroit meeting of the A. V. M. A. for his untiring efforts to add to their comfort and pleasure as one of the Committee of Entertainment, has just resumed light practice after three months of serious illness from malarial fever. The doctor, after six weeks' illness, returned to his duties, but soon suffered a relapse, which threw him back for weeks. His many friends among our readers will be much pleased to know that he is now considered a safe convalescent.

DR. THOMAS F. O'DEA, of Saugerties, N. Y., was appointed by the Board of Regents at their annual meeting in December as veterinary medical examiner in the place of Dr. Jno. A. Bell, resigned. His appointment was made from the old list furnished by the State Society two years ago, and is in deference to an opinion of the Attorney-General, who holds that the list of ten names furnished by the Society from which the Regents selected five, is the source from which vacancies are to be supplied during the tenure of office of those appointed. At the last meeting of the Society a different interpretation was placed upon this point, and two members were nominated to the Regents to supply the vacancy.

THE INDIANA FARRIERS' COLLEGE has been established at Indianapolis, Indiana, and opened its first session December 5, with L. A. Greiner, V. S., President and Treasurer, J. M. Greiner, V. S., Secretary, in the rooms of the former Indiana Veterinary College. The course for master shoers consists of dissections of the feet and limbs for six weeks, the remaining six weeks being devoted to lectures on lameness, shoeing and scientific appliances, the course requiring one night each week from 8 to 10. The junior class for journeymen and apprentices meets twice a week and consumes two hours at each sitting. At the close of three months the journeyman will be examined for the degree of M. F. (Master Farrier), while the apprentice will be required to serve under a master shoer until the next term of school, when he may enter the senior class and compete for the degree at the close of the term. The fee for master shoers is $10; for journeymen and apprentices, $15; diplomas $3 extra.

INOCULATING CATTLE WITH HUMAN TUBERCULOUS GERMS.—The following telegram is taken from the New York *Herald* of Dec. 27: "*Ann Arbor, Mich.*, Dec. 26.—Dr. Victor C. Vaughan went to Detroit Friday and visited the laboratories of Parke, Davis & Co., where he instituted a series of experiments to decide whether animals are affected by the germs of human tuberculosis. He has inoculated seven cows and several calves with germs taken from a human being afflicted with tuberculosis. These animals were placed in special stalls and will be watched with care and every symptom noted. Dr. Vaughan will follow these inoculations with others on horses and other animals, no matter how the first experiments result. Dr. Vaughan became deeply interested in the experiments made upon Miss Emma King, a New York nurse, in an endeavor to confirm Dr. Koch's theory of non-contagion from bovine tuberculosis. Now he proposes to reverse the operation."

DR. CARNEGIE'S MUNIFICENCE.—We have just learned from Professor McCormack, Secretary to the Carnegie Trust for the Universities of Scotland, that if a youth have the following qualifications his college (veterinary) fees will be paid by the Trust for him: "(1) He must be over sixteen years of age; (2) must be of Scottish birth or extraction, or must have given two years' attendance after the age of fourteen at a school or institution under inspection of the Scotch Education Department; and (3) must be qualified by preliminary examination under the Ordinances of the Scottish Universities Commission and the regulations of the Joint Board of Examiners to attend the

classes for which payment of fees has been claimed." We feel sure that there are many young men desirous of entering the profession, but debarred by the unfortunate lack of money from doing so, and to such young men we wish our readers to point out this great opportunity and privilege.—*Vet.. Journ. England.*

WORK OF HORSES' HOOFS.—A Boston automobile enthusiast with a penchant for figures has calculated that a sharp-shod horse pulverizes 24 pounds of road material on a macadamized highway for each mile traveled. He arrived at this result by carefully collecting, with the aid of an envelope and a fine brush, all the material loosened by two of the equine's hoof-beats. This performance he repeated in widely separated sections of the cultured city and collected the material disengaged from the road surface by six hoof-beats, and which is usually blown away in the form of dust. On weighing his material he found that he had .0366 pounds, or .0061 pounds per hoof-beat. Multiplying this by 1000 steps per mile for each foot—4000 steps in all—he found that it totalled 24 pounds. A rubber-tired automobile, he says, makes practically no impression on the roadway, from which he concludes that horses and steel-tired vehicles are the sworn enemies of the automobile so far as good roads are concerned. Some kind of a law to prevent the rapid deterioration of roads under steel hoofs and narrow steel tires should, he thinks, be enacted at once—the sooner the better.

A VALUABLE DOG.—Recently the eight-year old son of Wm. G. Morrisey was playing on the pier at the foot of 21st Street, Bensonhurst (New York City), accompanied by his dog, a large St. Bernard, two years old. "Old Sport" playfully jumped against the boy's breast, causing him to step backward, and in so doing he lost his balance and fell into the water below, which was covered by a thin coating of ice. The lad was a good swimmer but was heavily clothed, and the dog, seeming to understand the situation, plunged in, seized Willie by the collar and swam with him to shore, a distance of 150 feet. They both started on a run for home, the dog arriving there first. Mrs. Morrisey heard something scratching at the door, and on opening it she saw the hero rushing back to meet the frightened boy. Last winter he saved the boy's sister in a similar manner. The facts as above given were verified by Dr. Bell, of the REVIEW, in a personal letter from Mr. Morrisey. We read of many similar cases, but we always suspect exaggeration, and when they can be verified they should be placed on record, as a just tribute to "man's best friend."

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WE reproduce below an extract from a letter to the Abbott Alkaloidal Company, from one of New Jersey's most prominent veterinarians, and we have learned that since its receipt, a month or two ago, many *others* in that State have learned to appreciate what that excellent Chicago house has to offer them:

"The Abbott Alkaloidal Company's granules in canine practice should receive a trial by every up-to-date veterinarian. I for one shall give them the test they deserve, and from experience have already convinced myself that they are to be preferred to all other forms of medication in canine practice for one reason alone, which is, that there is absolutely no trouble to administer them, which is certainly a matter of no small importance, in the treatment of the smaller animals.

(Signed) J. PAYNE LOWE, D.V.S."

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"I have used Zenoleum as a surgical disinfectant and antiseptic. I have long advocated this kind of preparation. The low price should be an inducement to use it.

G. E. NESOM, V.S., State Veterinarian."

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